



County Borough of Southampton.

THE 29TH

Annual Report

ON THE

HEALTH OF SOUTHAMPTON,

For the Year 1902,

BY

R. E. LAUDER, F.R.C.S., Ed., D.P.H.,

Medical Officer of Health to the County Borough and Port of Southampton.

Medical Superintendent of the Borough & Fort Fever Hospitals.

Southampton :

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MDCCCCIII,

By the order of the Local Government Board, dated March 23rd, 1891, Article 18, Section 14, it is prescribed that the Medical Officer of Health shall "prepare an Annual Report to be made to the end of December in each year, comprising a summary of the action taken during the year for preventing the spread of disease, and an account of the sanitary state of his district generally at the end of the year. The report shall also contain an account of the enquiries which he has made as to conditions injurious to health existing in his district, and of the proceedings in which he has taken part or advised under the Public Health Act, 1875, so far as such proceedings relate to those conditions; and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that Sanitary Authorities have power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year. It shall also record the action taken by him, or on his advice, during the year in regard to offensive trades and to factories and workshops. The report shall also contain tabular statements (on forms to be supplied by the Local Government Board, or to the like effect) of the sickness and mortality within the district, classified according to diseases, ages, and localities."

COUNTY BOROUGH OF SOUTHAMPTON

1902.

TWENTY-NINTH ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH.

TO THE MAYOR, ALDERMEN, AND COUNCILLORS.

MR. MAYOR AND GENTLEMEN,

I have the honour to submit for your consideration the 29th Annual Report upon the state of the public health and the sanitary work performed in the Borough during the year 1902, together with a report, as required, on the work done under the Factory and Workshop Act, 1901, and brief details of the work carried out under the new Bye-Laws as affecting house drainage.

The death rate for the year is very satisfactory, viz., 15.5, or 1 less than in 1901, and is the lowest ever recorded in the Borough for any one year.

The low death rate is the more striking from the fact that this year, for the first time, the deaths occurring in South Stoneham Workhouse, amongst persons removed from the Borough, have been included in the total deaths.

The number of cases of infectious diseases notified during the year exceeded that of 1901, and, owing to the ready acceptance of the advantages offered by the Isolation Hospital, the small pavilions had to be kept constantly in use, which considerably increased the expense of administration.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

R. E. LAUDER,
Medical Officer of Health.

REPORT.

STATISTICAL SUMMARY FOR THE COUNTY BOROUGH OF SOUTHAMPTON.

Acreage	...	...	...	...	4,501
Population (estimated 1st July, 1902)			...	...	107,833
Number of persons per acre		...	...		24
Number of houses inhabited (census, 1901)				19,843	
Rateable value	...	...	...	...	£513,370
Births	...	...	...	...	3,152
Birth rate	...	...	...	...	28.8
Deaths	...	..	...	...	1,695
Death rate	...	..	...	...	15.5
Do. from zymotic diseases			...		1.45
Average death rate (10 years, 1893-1902)	...				17.19

POPULATION.

According to the returns received from the Registrar-General, the population for the whole Borough on the 1st April, 1901, was 104,824, and the estimated population for the year 107,833, as follows :—

	Population.		Houses Occupied.	Persons per Houses.
	Estimated.	Census.		Census, 1901.
Town Proper	62,000	61,319	10,887	5.63
Portswood and Bitterne Park	19,000	17,958	3,594	4.99
Shirley, Freemantle & Millbrook	...	26,833	5,362	4.76
	<hr/>	<hr/>		
	107,833			

TABLE showing Acreage, number of Inhabited Houses, Population and Death Rates in the Municipal Wards for the Years 1901 and 1902.

WARD.	Acreage.	Census, 1901.		1901.		1902.		Death Rate of Infants under 1 year of age per 1,000 population.
		Number of Inhabited Houses.	Population.	Number of Persons per Acre.	Death Rate from Zymotic Diseases.	Death Rate from Phthisis.	Total Death Rate.	
1. Town	64	954	5,775	90.2	0.52	1.04	18.18	4.68
2. St. James	... *84	1,244	7,590	*90.4	1.97	1.19	18.31	5.14
3. St. Mary	... 88	1,334	9,222	104.8	2.58	1.64	18.77	5.98
4. All Saints	... 178	1,255	6,584	37	1.21	1.87	16.40	2.88
5. Trinity	... 68	1,192	6,243	91.8	1.92	2.08	17.94	6.09
6. Northam	... 145	1,614	9,543	65.8	3.67	2.31	23.36	6.92
7. Nethols Town	79	1,456	7,374	93.1	0.95	2.58	17.50	4.07
8. Newtown	91	1,410	7,085	77.9	0.73	1.74	15.97	2.03
9. Bevois	... 184	1,624	7,795	42.4	1.03	0.64	14.62	3.72
10. Portswood	... 1864	2,398	12,066	114.	0.99	0.83	12.68	3.23
11. Banister	... 379	1,568	7,579	20	1.32	0.92	12.66	2.77
12. Freemantle	540	2,426	11,544	21.4	2.08	1.13	16.11	6.32
13. Shirley	... 962	1,368	6,424	6.6	1.87	0.62	15.72	5.91
Total	...	19,843	104,824	23.4	1.65	1.37	16.59	4.62
							1.45	1.47
							15.47	3.57

* Excluding Docks.

† Excluding Common.

The Deaths occurring in the Workhouse, Hospitals, and other Public Institutions have been distributed over the various Wards.

BIRTHS.

The number of births registered in the Borough for the year was 3,152, against 3,141 in 1901.

The excess of births over registered deaths was 1,426, and the birth rate 28.8 per 1,000. This is 1.0 lower than 1901, and .8 lower than the average for the previous ten years.

Town Proper	1,764	births	... 28.0	per 1,000
Portswood & Bitterne Park	564	,,	29.2	,,
Shirley, Freemantle & Mill- brook	824	,,	30.2	,,

DEATHS.

The number of deaths registered during the year was 1,726; of those 910 were males and 816 females, thus giving a death rate of 15.5 for the whole Borough, as compared with 16.5 the previous year, and 16.3 for England and Wales in 1902.

Of the 1,726 deaths, 338 occurred in public institutions, viz. :—29 in the Fever Hospital, 118 in Royal South Hants Infirmary, 100 in the Workhouse, 90 in Workhouse Infirmary, Shirley Warren, and 1 on the Hospital Ship.

In estimating the death rate, we have to subtract from the total 56 deaths which occurred amongst resident strangers, and add the deaths of 26 persons who belonged to the Borough and died in the South Stoneham Workhouse.

The death rate in each of the three Registration Districts of the Borough per 1,000 of the population is as follows :—

Town Proper	17.19
Portswood and Bitterne Park ..	12.33
Shirley, Freemantle and Millbrook ...	13.72

Infantile mortality, or death rate among infants under

one year is considerably lower than that of 1901, being 124 per 1,000 Births, as compared with 154 per 1,000 in 1901.

Town Proper	...	...	...	133.8
Portsmouth and Bitterne Park		...	...	117.0
Shirley, Freemantle and Millbrook		...	...	106.8

ZYMOTIC DEATH RATE

Is estimated on the number of deaths caused by the seven principal zymotic diseases, viz. :—small pox, scarlet fever, typhoid fever, measles, diphtheria, whooping cough, and diarrhoea.

The death rate for the year amounted to 1.45, as compared with 1.65 for 1901.

ZYMOTIC DISEASES.

Small Pox.—Nine cases of small pox were notified during the year; seven cases occurred in the town and two were notified in the port.

Three of the cases notified in the Town occurred in the old Workhouse. Considering the overcrowded state of the building at the time, it was in a great measure the thorough co-operation of the staff of the Incorporation which prevented the spread of the disease.

Re-vaccination was carried out on 23 persons who had come into contact with the cases in the Town.

The cases were notified early and immediately isolated, premises thoroughly disinfected, and contacts kept under daily observation.

1.—H. S., aged 21 years. Empress Road. Notified 20th February. Patient was a shunter on the London & South Western Railway. Unable to trace origin of infection.

2.—F. D., aged 24 years. Workhouse. (Discrete small pox). Unvaccinated. Notified 9th March. Patient was a labourer at the Docks; he had lodged at St. Michael's House for 2 nights, and being unwell entered the Workhouse. Had

been out of the town for several months previous to illness. Unable to trace source of infection.

3.—J. M., aged 38 years. Vaccinated in infancy. (Discrete small pox, also suffering from advanced tertiary syphilis). Notified 20th March. Patient was an inmate of the Workhouse, and had been in contact with previous patient. Died.

4.—T. F., aged 32 years. Floating Bridge Road. Notified 5th April. Patient was a lodger at the house. Arrived at Southampton, March 24th, from a district in Liverpool infected with Small Pox. Vaccinated in infancy. (Discrete small pox).

5.—J. W., aged 39 years. Workhouse: Notified April 22nd. Patient was a tramp, and had been in several Union Workhouses previous to his illness. Arrived at Southampton, April 8th. No evidence of vaccination. (Discrete small pox).

6.—E. H., aged 22 years. Bond Street, Northam. Notified 25th April. Patient was wife of a lodger at the house. Unable to trace source of infection. No evidence of vaccination. (Discrete small pox).

7.—F. G., aged 35 years. Patient arrived at Southampton, July 12th, in Transport "Oratava" from Cape Town. Notified July 12th. Vaccinated in infancy. (Discrete small pox).

8.—F. G. T., aged 32 years. French Street. The man was out of employment, and was lodging at a beer house in French Street. Arrived in Southampton, July 7th, from London. Notified July 22nd. Vaccinated in infancy. (Confluent small pox).

9.—J. B., aged 29 years. Arrived in SS. "Southwark" on August 15th, and was notified same day. Case was removed to West Quay Hospital for observation; it did not prove to be small pox and was discharged.

Typhoid Fever.—One hundred and twenty four cases were notified during the year. This is an increase of 16, as

compared with the number notified in 1901. The largest number of cases notified in one month was 36 in September, 21 of these occurring in the Northam and Chapel districts. Investigation at the time showed that 14 of the 21 cases—as well as 2 residing in other parts of the Borough—occurred amongst children who had been either bathing, wading, or eating shell-fish collected on the foreshore, which was subject to pollution from typhoid infected sewage.

Communications were forwarded to the School Board, Chief Constable, and owners of waterside premises pointing out the dangers arising from children bathing or wading on the foreshore, and asking for their co-operation in the matter.

Replies were received expressing willingness to assist us in the matter, and I believe much help was supplied in this direction.

SUMMARY OF THE 16 CASES.

<i>Date Notified.</i>	<i>Name.</i>	<i>Address.</i>	<i>Age.</i>	<i>Remarks.</i>
Sept. 2	A. B.	Bond Street	9 years.	Bathing and eating cockles collected from Itchen.
" 2	F. W.	Belvidere Terrace	10 "	Wading on the foreshore, Itchen.
" 5	W. W.	Bond Street	8 "	Bathing in Itchen, and eating shell-fish collected from Itchen.
" 6	W. M.	Hilda Place	12 "	Wading on the foreshore, Itchen.
" 7	E. W.	Bond Street	9 "	Eating crabs collected from shore at Northam.
" 7	H. C.	Kent Street	10 "	Had eaten cooked mussels collected from Itchen.
" 12	G. P.	Elm Road	9 "	Bathing at Crosshouse.
" 13	E. P.	Oxford Terrace	13 "	Had been digging bait at Mount Pleasant.
" 15	W. M.	Belvidere Terrace	13 "	Had been bathing.
" 16	G. B.	Bond Street	6 "	Had been bathing at Northam, and had eaten crabs collected at Mount Pleasant.
" 16	W. L.	Lower York Street	8 "	Had been bathing at Northam.
" 16	P. J.	Ditto		Ditto.
" 26	A. N.	Bond Street	4 "	Had been eating cockles collected at Northam.
" 27	W. H.	Belvidere Terrace	10 "	Had eaten cockles collected at Northam.
" 9	H. W.	North Front	11 "	Had been collecting cockles on shore, and had eaten same.
" 17	B. H.	Mount Street	11 "	Had been bathing.

In the districts of Northam and Chapel 49 cases were notified during the year.

OUTBREAK OF TYPHOID FEVER ATTRIBUTABLE TO OYSTERS.

In December, 19 cases were notified, as compared with 3 in December, 1901. In 13 of the cases the source of infection was traced to oysters, all of which came from the same district. The following are the details of same.

SUMMARY OF TYPHOID FEVER CASES NOTIFIED IN DECEMBER, AND TRACED TO INFECTED OYSTERS.

<i>Date Notified.</i>	<i>Name.</i>	<i>Address.</i>	<i>Age.</i>	<i>Oysters partaken of.</i>	<i>When taken ill.</i>	<i>Remarks.</i>
1902. Dec. 8	G. H.	Carlton Crescent	42	Yes	Dec. 3	Attended Mayor's Banquet, Nov. 10th.
,, 8	T. J.	Bargate Street	24	,,	Nov. 14	Ditto.
,, 11	A. S.	Craven Street, Kingsland	20	,,	,, 28	Lift man on premises where Banquet was held.
,, 12	W. R.	Westwood Road	44	,,	,, 12	Attended Mayor's Banquet, Nov. 10th.
,, 13	J. F.	Polygon	51	,,	,, 19	Ditto.
,, 13	G. F.	Belmont Road	41	,,	Dec. 1	Ditto.
,, 15	J. T. H.	Hulse Road	53	,,	,, 15	Ditto.
,, 24	J. M.	Belmont Road	—	,,	—	Ditto.
,, 8	W. L.	Millbank Street	20	,,	,, 1	Ate Emsworth oysters, Nov. 28th, at a shop.
,, 12	F. A. F.	Waterloo Road	23	,,	,, 2	Fishmonger.
,, 16	S. W.	Shirley Road	44	,,	,, 7	Ate Emsworth oysters in a shop, Nov. 17th.
,, 9	M. B.	Portswood Road	28	,,	Nov. 28	Sold oysters.
,, 11	E. M.	Brookvale Road	19	,,	,, 27	Ate oysters purchased from above.

Three cases of typhoid fever occurred amongst persons residing outside the district, which are not included in the above table, and who had partaken of oysters at the Mayor's banquet on 10th November.

The long period of incubation and the cause of infection not being continued make investigation into the source of infection in cases of typhoid a matter of considerable difficulty; and in most cases it was impossible to arrive at a definite conclusion as many of these cases were under treatment for a considerable time before being notified.

The fact of the disease occurring amongst several members of the Council, and others who dined with them on a particular date, caused me to look for the source of infection

in food supplied in accordance with the menu of the banquet given to the retiring Mayor on the 10th November.

All possible sources of infection on the premises where the banquet was held were carefully examined. The drainage arrangements on the premises was introduced about two years ago and carried out by an eminent firm. It consists of two systems, one for the basement and the other for the ground floor and all above the ground floor. The basement system is raised by lifts to the sewer level, and that on the ground and upper storeys is emptied by gravitation.

I was assisted in examining the drainage on the premises by a complete plan of the system, and no defects were found.

The different ingredients contained in the prepared dishes provided at the banquet, also the methods and apparatus employed were thoroughly investigated but nothing was found to account for the symptoms produced. In case of doubt the orders and invoices for goods were required and in each case the information was readily supplied, and proved satisfactory.

While pursuing inquiries in connection with those who were suffering from typhoid fever, and had dined together on the 10th November, I found cases occurring amongst persons altogether remote, but whose probable infection pointed to a common source, *i.e.*, oysters that had been obtained from Emsworth.

Having acquired information as to the Emsworth oyster beds and the sewage arrangements of the surrounding district, it seemed desirable to make a visit to Emsworth to see if the existing conditions justified what seemed the reasonable deductions drawn from cases under observation.

I therefore visited Emsworth on 16th December to inspect the oyster beds as a possible source of infection, and found the main sewer outfall situated at the south-west corner of the Town, and in the midst of the oyster beds, and

about 100 feet from where the oysters which were supplied and used at the banquet on 10th November were taken. There were three other outfalls at the Queen Street Bridge, which entered the stream that flows on the eastern side of the town, and received lower down the King Street outfall. This stream continues round to the south, and flows past the above-mentioned oyster beds, the sewage eventually discharging into Chichester Harbour through the Emsworth Channel, which is 3,000 feet to its junction with Fowley Rithe.

On the latter part of the ebb tide the Emsworth Channel must contain a large amount of sewage, which on the young flood finds its way back to the oyster beds.

I was informed by Dr. H. Lockhart Stephens, that on and since the 22nd October last, 13 cases of typhoid fever had occurred in his district, eight of which were in Emsworth proper, which has a population of about 2000. All these eight cases occurred in houses connected with the main sewer outfall. Many of the houses without water closets had cesspools with overflows connected with the sewers, which were originally intended for surface and slop drainage but are subject to tide locking.

Considering the population of Emsworth, and the number of cases of typhoid fever which occurred there, it is reasonable to say an epidemic then existed in the town.

Eight of the cases of typhoid which occurred in Emsworth were situated in the district which is drained into the main sewer outfall and among the oyster beds.

When at Emsworth I had an opportunity of examining the books of one of the principal merchants, and found that the oysters from the beds were widely distributed over the country, and supplied to several people in Southampton.

It is my opinion that the oysters taken from the Emsworth oyster beds at that time were subject to contamination from

typhoid infected sewage, and were the direct cause of infection of the thirteen cases specified above.

Circulars with a copy of menu of banquet held on the 10th November were sent to each of the guests who attended, asking them to state of which article of food on the menu and of which wines or mineral waters they partook ; also whether they suffered from any subsequent illness which could be attributed to the banquet.

Particulars were received from 128 out of the 132 guests who were present at the banquet, and the lift man, and with the exception of 16, it was found they all partook of oysters. Of the sixteen persons who did not partake of oysters only one suffered from any inconvenience afterwards, and he complained of slight abdominal pain.

Of the remaining 112 who had eaten oysters, 53 suffered more or less severely from illness, which in the majority of cases was undoubtedly attributable to some article of food partaken of on the occasion of the banquet. Of those stated to have been ill after the banquet, ten suffered from enteric fever (also the lift man), and the remainder from diarrhoea or vomiting, more or less violent, or from gastritis or other abdominal inconvenience.

The three following cases which were notified during the year also probably owe their infection to oysters.

R.P., aged 16 years, was admitted to the Isolation Hospital from the S.S. "Konigen Luise," on 15th September, and M.R., age 40 years, was admitted from the S.S. "St. Louis" on November 20th, suffering from typhoid fever. Both cases travelled as first class passengers from New York, at which place they stated they had partaken freely of oysters.

E.G., age 32 years, was admitted to the Isolation Hospital on 25th November suffering from typhoid fever. This case had eaten oysters at Poole fourteen days before.

Following the report of the Local Government Board

published in 1896, "On Oyster Culture in relation to Disease," a Bill was introduced in 1899 placing the control of oyster layings in the hands of County Councils ; it was successfully opposed by those interested in the oyster trade.

The Local Government Board has recently been petitioned by many authorities to introduce legislation to prevent laying in places subject to sewage contamination, and the selling of shellfish for human consumption which has been subject to sewage contamination.

The difficulty of providing a practical sewage disposal scheme which will produce an effluent free from infection is great, and any legislation to be effective, and not simply hamper the home industries, must give power to control the importation of shellfish which at present is carried on extensively.

Scarlet Fever.—During the year 261 cases of scarlet fever were notified in the Borough. This is the largest number since 1899. It did not affect any district in particular, but in proportion to the population, the greatest number of cases occurred in the Shirley and Freemantle districts, where it existed from the commencement of the year and kept continually re-occurring amongst the scholars attending the Freemantle National Schools, which were disinfected on three occasions during the year.

The majority of the cases were of a very mild character ; and on several occasions children were found at school and in the streets in a peeling condition.

Seven of the cases admitted to Hospital as scarlet fever were complicated by diphtheria.

Three deaths certified as scarlet fever occurred amongst cases complicated by diphtheria.

Second Attacks.—During the year three cases admitted as scarlet fever developed a second attack while still peeling from the primary attack,

In each case the primary and second attacks were characteristic :—

1.—F. H., male, aged 10 years. Admitted on the second day of disease with scarlatinal rash ; sore throat and temperature 101.6 F. Desquamation ensued. On the 28th day of disease patient again sickened, temperature rose to 104 F, throat became infected, and a bright scarlatinal rash appeared. Desquamation followed.

2.—J. H., female, aged 6 years, admitted on the 3rd day of disease with marked scarlatinal rash, infected throat, peeling tongue, and temperature 102 F. Desquamation ensued. On 33rd day of disease patient sickened, temperature rose to 101.4 F, and scarlatinal rash re-appeared. Desquamation followed.

3.—A. K., female, aged 4 years, admitted with undoubted Scarlatinal desquamation. There was a history of sore throat and "biliary attack" about a month previously. After being in hospital six days she developed a scarlatinal rash, temperature rose to 102 F, and throat became infected. Desquamation again ensued.

Return Cases.—Seven return cases of scarlatina occurred during the year, notwithstanding that the average stay of the patients in Hospital was 48 days, and stringent precautions taken as to disinfection on discharge. No cases were discharged while peeling.

DIPHTHERIA.

One hundred and forty-four cases were notified during the year, most of which were of a very mild form, presenting slight clinical evidence and only being definitely proved by bacteriological examination. A few cases were of a very severe character.

Bacteriological examinations were made when desired by medical attendants if cases presented doubtful clinical characters.

Sixty-two cases occurred among the scholars attending public schools, and six among those attending private schools.

Four cases occurred in the Royal South Hants and Southampton Hospital, and are included in the total of cases for Newtown Ward.

There were twenty-four deaths from diphtheria during the year, thirteen of those occurred in the Isolation Hospital. All the fatal cases were admitted after the fourth day of the disease, and in no case had antitoxin been administered before admission.

The large number of cases occurring in Freemantle district was the subject of investigation. It was found that most of the cases occurred in houses comparatively new, and six cases occurred amongst children attending Foundry Lane Board School, which was only opened on 1st September.

One National School and one Board School were disinfected during the year owing to cases of Diphtheria having occurred amongst the scholars.

Cases of Diphtheria notified during the year in the different Wards, with Sanitary Defects found and remedied.

Ward.	No. of Cases.	Waterclosets inadequately flushed with water.	Defective guttering causing dampness.	Defective Drains.	Dirty houses.	Defective yard paving.	Fowls kept in dirty state.	No sanitary dust bin.
Town ...	6	...	...	2	1	...	...	2
St. James ...	8	2	...	2	1	2	...	3
St. Mary ...	21	1	3	7	3	3	...	9
All Saints ...	8	...	...	3	2	1	...	1
Trinity ...	11	...	...	2	...	...	...	1
Northam ...	10	...	1	7	...	1	1	8
Nichols Town ...	9	2	1	9	1	2	...	6
Newtown ...	10	...	...	5	...	...	...	1
Bevois ...	10	2	...	6	1	1	1	4
Portswood ...	17	1	2	7	3	...	...	4
Banister ...	7	...	...	2	...	...	...	...
Freemantle ...	23	...	1	12	...	3	1	3
Shirley ...	4	...	...	3	1	5	...	3
	144	8	8	67	13	18	3	45

MEASLES.

Measles was prevalent in the Town during the first five months of the year, the highest mortality occurring in the months of March and May. Fifty deaths were registered during the year, twelve of which occurred in Fremantle ward, six in Shirley ward, and six in St. Mary's ward.

The Western District Board School was disinfected owing to cases of measles occurring amongst the scholars.

WHOOPING COUGH.

Whooping cough was responsible for 43 deaths during the year, and was most prevalent in the latter part of the year. The highest mortality was in Fremantle, Northam, and St. Mary's wards, the numbers being 7, 7, and 6 respectively.

DIARRHŒA.

The deaths from diarrhœa amounted to 22, the lowest recorded since 1894, comparing very favourably with the total of 131 registered in the previous year.

Of the 22 deaths, 7 occurred in Northam ward and 4 in St. Mary's ward.

TUBERCULOSIS.

One hundred and sixty-one deaths occurred from pulmonary tuberculosis during the year, as compared with 144 in 1901 and 149 in 1900. The voluntary notification of Tuberculosis by medical attendants has not proved as successful as anticipated, most patients objecting to their medical advisers notifying the disease, and without their consent notification cannot be made. During the year 18 cases were notified by the consent of the patients. In most cases insanitary conditions were found and modified or removed.

Fifteen houses where deaths occurred from tuberculosis were disinfected; in all other cases it was offered but refused.

Thirty-seven specimens of sputa were examined for tubercle bacilli, free of charge, for medical practitioners practising in the Borough.

The introduction of compulsory notification in cases of Tuberculosis would affect persons notified in such a manner as to interfere with them in obtaining their livelihood, and as this disease occurs most frequently in men between the age of 15 and 55, and among a class who contribute more or less towards the support of families, it would be necessary to make provision for their treatment in institutions at an early stage, and also to make financial provision during their absence in a sanatorium. In many cases it would be necessary to be in a position to make changes in their previous mode of living or occupation on their discharge from the sanatorium, if their improved condition was to be maintained.

Sanitary defects found in the 18 houses in which Tuberculosis was notified during the year.

Number of defects found in houses.	Nuisance.	Result.
4	Drains found choked and defective ...	Obstructions removed and drains repaired.
5	W.C.'s found in a foul condition, caused by the same being inadequately supplied with water for flushing ...	Efficient supply of water provided to the closets.
12	Yard paving found defective, causing foul accumulations	Yards repaved.
7	Houses found in a dirty state	Houses cleaned and whitewashed.
4	Roof of houses found defective, causing damp rooms, &c.	Roofs repaired.
1	Accumulation of manure	Removed.
1	Defective ventilating shaft of the house drain	New 4 inch shaft substituted.

1902 (53 weeks ending 3rd January, 1903).—TABLE showing the number of Cases of Scarlet Fever, Diphtheria, and Enteric Fever, and Deaths from Measles, Whooping Cough, and Diarrhoea, tabulated according to the Municipal Ward in which such Cases or Deaths occurred.

Week ending	TOWN.		ST. JAMES.		ST. MARY.		ALL SAINTS.		TRINITY.		NORTHAM.		NICHOLS TOWN.		NEWTOWN.		BEVOIS.		PORTSWOOD.		BANISTER.		FREEMANTLE.		SHIRLEY.		TOTAL.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
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TOTALS ... 9 6 6 5 3 1 11 8 7 3 6 2 21 21 16 6 4 4 2 13 11 14 2 4 2 35 10 39 5 7 12 9 4 2 11 10 6 2 2 1 27 17 14 4 4 3 28 7 8																												

ISOLATION HOSPITAL.

CASES ISOLATED FOR TREATMENT.

This Table shows all admissions to the Isolation Hospital, West Quay Hospital, and Hospital Ship, and includes cases removed from Vessels entering the Port, and cases admitted from neighbouring districts.

DISEASE.	Remaining 1st Jan., 1902.	Total number of admissions	Actual cases ad- mitted as diagnosed at Hospital.	Cases admitted proving not to be the disease notified.	Discharged	Died.	Remaining 31st Dec., 1902.	Average duration of stay.	Case mortality (per cent.) actual cases.
Scarlet Fever	...	20	214	204	10	170	5	57	2·4
Diphtheria	...	1	95	68	27	82	13	3	19·1
Enteric Fever	...	5	105	93	12	93	11*	6	8·6
Measles	...	1	28	27	1	29	—	—	—
Small Pox	...	—	9	8	1	8	1	—	—
Chicken Pox	...	—	5	5	—	5	—	—	—
Suspected Plague	...	—	2	2	—	2	—	—	—
Totals	...	27	458	407	51	389	30	66	—

* Three of these deaths were amongst cases which proved not to be Enteric Fever, viz. :—Tuberculosis, Mesenteric Gritis, and Ulcerative Endocarditis.

† Died from Syphilis.

WEST QUAY OUT-BATHING STATION AND OBSERVATION WARDS.

During the year two cases of suspected plague and five cases of suspected small pox were removed to West Quay for observation.

One case of small pox, owing to stress of weather, had to be detained three days before being conveyed to the ship. In all cases when diagnoses were made the cases were removed either to the Hospital Ship, Isolation Hospital, or discharged.

Early in December, ten cases of measles removed from a ship, owing to absence of accommodation at the Isolation Hospital, were treated at West Quay.

During the year, 207 contacts were removed to West Quay and disinfected.

Comparative Mortality of cases occurring in the Borough, treated in Hospital, and at Home.

Disease.	Whole Borough.		Treated in Hospital.		Treated at Home.	
	Total Number of cases notified.	Case Mortality per cent.	Number of cases notified admitted to Hospital	Case Mortality per cent.	Number of cases notified treated at Home.	Case Mortality per cent.
Scarlet Fever...	261	1.91	205	2.44	56	0.0
Diphtheria ...	144	16.67	83	15.66	61	18.03
Enteric Fever	124	12.14	71	9.86	53	15.09
Totals ...	529	8.32	359	6.96	170	11.17

ISOLATION HOSPITALS

(Including West Quay Hospital and Hospital Ship).

SOURCE OF CASES ADMITTED.

Source of Cases.	Scarlet Fever.	Enteric Fever.	Diph- theria.	Measles.	Small Fox.	Other Diseases.	Total.
Town Proper ...	97	61	48	9	6	...	221
Portswood ...	25	5	13	...	1	..	44
Shirley ...	86	9	24	...	..	...	119
Other Sanitary Authorities ...	4	1	10	...	...	..	15
Imported by Vessels	2	29	...	19	2	7	59
Totals ...	214	105	95	28	9	7	458

TABLE D.

PAYING PATIENTS ADMITTED.

Scarlet Fever	...	...	..	15
Diphtheria	...	...	..	9
Enteric Fever	...	...	...	7
Measles	...	...	...	17
Small Pox	...	...	...	4
Chicken Pox	...	...	.	2
				—
			54	—

SUMMARY OF GENERAL SANITARY WORK.

Inspection of premises after complaint of nuisances, including revisits	...	...	...	17,226
Inspection of Slaughterhouses	...	...	...	1,738
,, Common lodging houses	...	...	...	2,577
,, Courts, alleys, stable-yards, &c.	...	...	...	1,459
,, Dairies, cowsheds, and milkshops	...	...	...	1,505
House to house inspection	...	...	...	1,297

Dairies, Cowsheds and Milkshops Order, 1885-1886.—There are 42 dairies and 217 purveyors of milk in the Borough.

During the year 36 Purveyors have ceased to sell milk, owing to the new regulations, which came into force on 1st September, 1902, being more stringent.

The new regulations enforce strict cleanliness of dairies, milkshops and milk vessels, also the cleansing and lime washing of the walls and ceilings of dairies and milkshops twice every year, viz.: April and October.

The regulations also enforce thorough cleansing of dairies and milkshops at the termination of every day.

Most of the milk consumed in the Borough comes from the districts outside. Many of such districts have no special regulations. It would be desirable to have control, or at least power of inspecting, and when necessary, prohibiting the sale of milk from premises conducted on insanitary methods.

There are 17 cowsheds in the Borough. Three have been closed during the year owing to the insanitary condition of the buildings.

Cowsheds in the County Borough of Southampton, 1902.

Name.	Situation.
J. M.	38, Cambridge Road.
F. T.	40, Cambridge Road.
T. T.	Church Farm, Highfield.
G. H.	Whitedwood, Shirley.
A. F. K.	Aldermoor Farm, Shirley.
G. H. B.	Mill Farm, Mousehole Lane.
E. S.	The Dairy, Millbrook.
C. B.	The "Royal Mail," Millbrook.
A. B.	Hill Lane.
C. P.	88, Mount Pleasant Road.
W. P.	High Crown Street.
G. F. M.	141, Priory Road.
G. N.	20, Eastfield Road.
T. W. M.	4, Clarence Street.
W. P.	Brookvale Farm, Portswood
W. H.	1a, Aberdeen Road.
G. D. P.	Porter's Lane.

The following Cowsheds have been closed during the year.

B.	Romsey Road.
H.	Coxford.
S.	High Crown Street, Highfield.

(For particulars of legal proceedings, see cases before the Justices).

Particulars.	Town Proper.	Shirley, Freemantle, & Millbrook.	Portswood, & Bitterne Park.	Total.
No. of Cowsheds on register	2	7	8	17
„ Dairymen on register	22	8	12	42
„ Milkshops on register	151	39	27	217
„ Purveyors of milk registered during year 1902	30	16	16	62
„ Purveyors of milk removed from register	45	14	15	74
„ Dairies transferred	4	1	1	6
„ Dairies closed	—	2	—	2
„ Cowsheds closed	—	3	—	3
Notices to abate nuisances	54	49	50	153

Slaughterhouses.—There are 40 slaughterhouses in the Borough ; they have been regularly inspected, and lime-washing was carried out in accordance with the bye-laws. In one instance the whole of the drainage was relaid and the premises put in a good sanitary condition.

SLAUGHTERHOUSES ON THE REGISTER.

Town.	Portsmouth.	Shirley & Freemantle.
Registered 15	Registered 3	Registered 3
Licensed 10	Licensed 3	Licensed 6
Total 25	Total 6	Total 9

The number of inspections made were 1,738.

	Town Proper.	Portsmouth.	Shirley.
Notices of complaint ...	4	3	4
Complaints remedied ...	4	3	4

Common Lodging Houses.—Ten common lodging houses exist in the Borough ; they contain 60 bedrooms, and are registered to accommodate 189 persons. Three houses have been registered and one transferred during the year. No case of infectious disease has occurred among the inmates during the year. The lime-washing was carried out in the months of April and October, in accordance with the Public Health Act. Two thousand, five hundred and seventy-seven visits were made during the year.

The large number of visits were made as a precautionary measure, small pox having occurred in many of the lodging houses in London.

In 1899 there were seven common lodging houses in the Borough, registered to accommodate 155 persons. The Municipal lodging house was opened on 1st November, 1899. It contains 181 beds, and an average of 175 are occupied nightly.

Infectious Diseases.—One thousand, three hundred and eighteen visits were made to houses in which infectious diseases had occurred ; inquiries were made relative to source of infection, schools attended, milk supply, &c.

Frequent visits were made to houses where patients were nursed at home, to keep observations as to isolation, disinfection, &c.

Of the 819 cases notified—208 of these being under the special regulation regarding chicken pox—384 were received and treated in the Isolation Hospital.

One hundred and ten sanitary defects were found in houses in which infectious disease occurred. Notices were served on the owners, who readily complied with the requirements of the Authority.

The number of houses disinfected was 1,024.

HOUSES UNFIT FOR HUMAN HABITATION.

The following houses have been certified as unfit for human habitation during the year :—

Situation of Property.	No. of Houses.	Date of Notice.	Remarks.
Simmel Street	1	Feb. 27	House closed
Princes Street	1	“ 27	House made habitable
Mount Street	1	“ 27	Ditto
Chapel Street	1	“ 27	Ditto
York Square	1	“ 27	House closed
Belgrave Road	7	“ 27	Houses made habitable
Millbank Street	5	Mar. 13	Ditto
Mount Street	2	“ 13	Ditto
Lime Street	3	“ 13	Ditto
Lime Street . ..	3	“ 13	Houses closed
Dear's Court	5	May 5	Ditto
Maybush	1	June 14	Ditto
Pound Street, Shirley ...	4	July 22	Houses made habitable
Coxford	1	Sept. 26	House closed
Coxford	7	“ 26	Ditto
Longeroff Street	1	Oct. 16	Ditto
Cossack Street	1	“ 16	House made habitable
Dorset Street	2	Dec. 12	Houses closed
Old Shirley	1	“ 12	Ditto

GENERAL ROUTINE WORK.

Nuisances reported by the Inspectors	...	...	3,696
Ditto at the office	...	...	601
Preliminary notices served and complied with for abatement of nuisances	...	...	2,500
Legal notices, ditto	...	...	305
Nuisances abated by verbal notice	..	..	1,797
Drains tested with smoke	...	...	418
Ditto with water	...	...	300
Found defective after testing..	...	...	278
Drains found choked and subsequently cleared	...	...	362
Drains reconstructed	...	...	342
Drains retrapped ...	...	...	377
Drains intercepted from sewer and ventilated	...	...	136
Soil pipes (indoor) abolished and new soil pipes fixed on outside of houses and ventilated ...	...	...	59
Bath and sink waste pipes disconnected from drains and made to discharge over open gully traps ...	...	...	178
Water laid on to closets for flushing ...	...	...	195
Water closets in houses externally ventilated	...	...	35
Old drains abolished and new drains substituted	...	...	18
Water closets and urinals reconstructed ...	...	...	24
Premises drained to sewer—Shirley district	...	...	29
Stables ditto ditto ...	..	..	10
Pan closets abolished and modern closets substituted	...	...	9
New pans fixed to closets ...	...	...	352
Cesspools abolished—Shirley district	...	...	22
Ditto cleansed ditto ...	...	...	19
Privies abolished and water closets substituted—Shirley district	...	...	10
Paving in back yards repaired	...	...	315
Back yards paved...	...	...	51
Animals kept in dirty state in close proximity to dwelling houses—removed	...	...	37
Overcrowding of houses—numbers reduced	...	...	6
Courts, water closets and urinals re-limewashed	...	...	27

Houses cleansed and whitewashed	...	...	381
Defective roofs of houses and guttering under same causing damp rooms, repaired	...	...	485
Manure and offensive matter removed	...	...	155
Sanitary dustbins provided to houses	...	...	690
Stables re-limewashed	...	...	9
Inspection chambers provided to house drains	...	...	62
Dirty houses cleansed	...	...	20
Dung vaults reconstructed	...	...	7
Earth closet ,,,	...	...	1
Defective ventilating shafts of house drains, repaired	...	...	17
Courts repaved	...	...	1
Ashpits reconstructed	...	...	7
Ground floor ventilation provided to houses	...	...	18
Fresh air inlets to house drains repaired...	...	...	17
Stables repaved	...	...	2
Sinks in houses reconstructed	...	...	116

UNSOUND FOOD.

The following articles of unsound food were condemned and destroyed by Justices' orders during the year :—

18,269 lbs. of Beef.	65 lbs. of Pork,
6,482 ,,, Fish (comprising Bass, Codfish, Whiting, Mackerel, Plaice, Haddock, and Bloaters).	
81 lbs of Jam.	3,640 lbs. of Peas

Case of Eggs.

ARTICLES DISINFECTED IN THE STEAM DISINFECTOR, WEST QUAY.

Beds and mattresses	...	...	1,997
Bolsters and pillows ..	...	...	2,760
Blankets ...	...	...	9,193
Sheets ..	...	...	2,946
Counterpanes	...	...	1,104
Sundries ...	...	...	24,889
			<hr/>
			42,889

**CASES BEFORE THE JUSTICES OTHER THAN FOOD
AND DRUG CASES DURING THE YEAR.**

Situation of Premises.	Particulars.	How Dealt With.
Glasgow Cottage, May-bush	Polluted well	Order made by Justices to close well—costs imposed, 8s.
ditto	ditto	ditto—6s.
Fir Tree Cottage, Coxford	ditto	ditto—6s.
Ivy Cottage, Millbrook	ditto	ditto—6s.
21, Elgin Road, Free-mantle	ditto	ditto—6s.
Hope Cottage, Henry Road	ditto	ditto—8s.
Romsey Road, Shirley	ditto	ditto—6s.
10 and 12, Redbridge Hill	ditto	ditto—14s.
11, Lime Street, Rookery	House unfit for human habitation	Closing order made by Justices — costs imposed, 6s.
13, ditto	ditto	ditto
15, ditto	ditto	ditto
60, Millbank Street	ditto	Order made by Justices to make house habitable in a month—costs of summons imposed, 3s.
61, ditto	ditto	ditto
62, ditto	ditto	ditto
63, ditto	ditto	ditto
64, ditto	ditto	ditto
5, Mount Street	ditto	Closing order made by Justices — costs imposed, 6s.
14, York Square	ditto	ditto - 8s.
1, Cherry Tree Terrace, Belgrave Road	ditto	ditto—8s.
2, ditto	ditto	ditto—6s.
3, ditto	ditto	ditto
4, ditto	ditto	ditto
5, ditto	ditto	ditto
6, ditto	ditto	ditto
7, ditto	ditto	ditto
Fir Tree Cottage, Coxford	ditto	ditto
2, The Drove, Coxford	ditto	ditto
3, ditto	ditto	ditto
4, ditto	ditto	ditto
5, ditto	ditto	ditto
6, ditto	ditto	ditto
7, ditto	ditto	ditto
8, ditto	ditto	ditto
Glasgow Cottage, May-bush	ditto	ditto
44, Pound Street	ditto	ditto
46, ditto	ditto	ditto
French Street	Unsound fish	Case dismissed
5, Commercial Road	ditto	Fined £5 and 9/6 costs.
Liverpool Street, Bevois Town	Insanitary cowshed	Fined 10/- and 6/6 costs.
76, Canal Walk	Unsound meat exposed for sale.	Fined £5 and 10 6 costs.
Dining Rooms, Empress Dock	Unsound meat	Case dismissed
31, Northam Road	Infringement of the Dairies, Cowsheds, and Milkshops Regulations.	Fined 20/- and 6/6 costs.
St. James Road, Shirley	ditto	Fined 40/- and 6/6 costs.
Ditto	ditto	Fined 20/- and 6/6 costs.

FOOD AND DRUGS ACT.

One hundred and seventy-two samples were taken by the Inspectors during the year, and submitted to the Public Analyst for analysis, viz. :—

Milk ...	...	...	...	73
Butter	...	..	...	42
Coffee	...	...	...	21
Mustard	...	..	...	5
Pepper	...	...	...	9
Oatmeal	...	...	...	9
Ground Rice	...	...	...	4
Lard	...	...	...	6
Whisky	...	...	...	3
172				

Of these samples five were found adulterated. Proceedings were taken in three cases and penalties obtained in two. The other case was dismissed. (See Analyst's Report in Appendix).

DRAINAGE UNDER NEW BUILDING BYE-LAWS.

It is provided by par. 4 of Sec. 109 of the New Building Bye-Laws (which came into force on 24th December, 1901), that :—

“ Every person erecting a new building shall, before proceeding to cover up any sewer or drain of a building, deliver or send, or cause to be delivered or sent, to the Medical Officer of Health, at his office, three days' notice in writing, in which shall be specified the date upon which such sewer or drain will be ready for testing and inspecting.”

As a house drain includes all pipes, traps and fittings employed for the removal from a building of all foul and effete matter, and such appliances as may be adopted to

prevent a back current of foul air, it was found desirable that the drainage plans of new buildings should be submitted to the Medical Officer of Health when application was first made, so that an early expression of opinion on the system proposed, or a suggestion during the course of construction, would obviate the possibility of any clashing.

Mr. A. Hennen was appointed drainage inspector by the Health Committee on February 6th, 1902.

During the ten months ending 31st December, 1902, 143 building plans were submitted and examined, alterations being suggested on 52 of same.

The 143 plans submitted represented—

Dwelling Houses	...	...	..	306
Alterations and Additions	...	...	..	84
Other Premises	...	...	..	25
			—	
			415	—
Houses completed and certificates granted			74	
Alterations and additions	...	...	..	27
Other premises	...	...	..	11
No. in progress	...	...	..	84
No. of plans of premises not commenced			219	—
			415	—
No. of inspections during progress of work	...	...	..	1,152
Drains tested and re-tested	...	...	..	127

Proceedings were taken before the Justices for breach of Bye-Laws in two cases, viz.:—

Breach of bye-law No. 109 (Defendant not giving notice previous to covering drain). Fined costs of court.

Breach of bye-law No. 84. (Fixing unsuitable soil pipe). Defendant fined £1 and costs.

Should it be found necessary to amend the bye laws, it would be advisable to make provision for greater facility in clearing, inspecting and testing drains by the construction of

manholes at the change in direction of drains, and at the point of interception from the public sewer ; also at each end end of any drain passing under a building. In the case of drains constructed of heavy cast iron there should be a table giving a fixed standard of weights for the various sizes.

APPENDIX A.

FACTORY AND WORKSHOP ACT, 1901.

1st Annual Report.

In accordance with the requirements of the Factory and Workshop Act, I have the honour to submit the following report on the administration of the Act so far as the matters under the charge of the Council are concerned.

For the purpose of their duties with respect to workshops and workplaces under the Act, and under the Public Health Acts, the Council and their officers are given the same powers of entry, inspection, taking legal proceedings or otherwise, as a Factory Inspector possesses. The powers conferred by this Act on the Council are in addition to and not in substitution of any other powers which they may possess.

Factories and Workshops.—There are 430 entries in the Workshop Register, representing 54 different trades, 614 workshops or workrooms, and 4,027 workers. One thousand two hundred and forty-seven inspections have been made during the year and 181 nuisances abated. (See Tables).

Fifty-three notices respecting new workshops, change of address, or contravention of the Factory and Workshop Act, have been forwarded to His Majesty's Inspector during the year.

Factories.—In the case of Factories the duties of the Council are few, and include the seeing that every Factory in its district is provided with means of escape in case of

fire. Another duty in regard to Factories is the enforcement of the requirements in Section 22 of the Public Health Acts Amendment Act, 1890, as to the provision of suitable and sufficient sanitary conveniences.

TABLE (A)—FACTORIES.

Analysis of Factories on Register, with number of male and female employés, and visits paid.

Trade.	No. on Register.	No. of Employés.			No. of Visits during year.
		Male.	Female.	Total.	
Bootmakers	1	4	—	4	1
Brass and Iron Founders	2	20	—	20	4
Brush and Basket Makers	2	53	18	71	8
Builders	9	168	—	168	9
Cabinetmakers	3	13	—	13	3
Cement Works	3	65	—	65	15
Cycle Makers	3	22	—	22	3
Joinery Works	4	177	—	177	8
Masons	1	25	—	25	1
Margarine Factories ...	1	53	—	53	2
Mineral Water Works ...	7	53	18	71	22
Oil Cake Factories ..	1	60	—	60	2
Sailmakers	1	3	—	3	1
Ship and Yacht Builders	3	604	—	604	14
	41	1320	36	1356	93

NUISANCES ABATED IN FACTORIES DURING YEAR.

Water closets under same roof as bakehouse abolished	1
New water closets constructed	2
Sanitary convenience re-constructed	1
Insanitary privy demolished...	1
Urinals constructed	2
Total	7

Safety from Fire.—In the case of Factories and Workshops in which more than forty persons are employed, or rooms in which more than ten persons are employed, the Council is charged with the duty of ascertaining whether they are provided with such means of escape from fire as can be reasonably be required.

The following Factories not being so provided, received notices and carried out the following work :—

DESCRIPTION.	WORK CARRIED OUT DURING YEAR 1902.
Factory. L. & Son, Engineers, Founders, &c.	An iron ladder fitted outside trap door of brass finishing shop on first floor leading to yard. The door between Electricians' and Joiners' shops hinged so as to open both ways.
Factory. K. & Co., Lansdowne Hill.	A trap door in floor and ladder fixed on wall forming communication between third and second floors at south end of building, a portable wooden ladder kept on second (south end) to communicate with ground, also window hinged to open outwards for exit.
Factory. T., M. & C., Belvidere.	An iron ladder fixed outside window of east end of Joiners' shop, leading to ground, and the sash forming approach to same hinged to open. NOTE.—These premises were destroyed by fire 11th October, 1902.
Factory. D., S. & Co., Northam.	The two doors connecting the two Joiners' shops and store on first floor are fitted with double spring hinges so as to open both ways, and an emergency ladder is provided at south west end of building to provide a means of escape.

Workshops and Workplaces.—In regard to workshops and workplaces, the Council has important duties which may be classified under four heads, viz:—

1. The sanitary condition of workshops and workplaces.
2. Provision of means of escape in case of fire.
3. Special sanitary regulations for bakehouses.
4. Home work.

TABLE (B)—WORKSHOPS.

Analysis of workshops and workplaces on the Register, with number of male and female employés, and visits made.

Trade.	No. on Register.	No. of Employes.			No. of Visits during Year.
		Males.	Females.	Total.	
Art Needlework	1	...	4	4	...
Blacksmiths and Coachbuilders	32	144	...	144	71
Blind Makers	2	10	...	10	2
Boot and Shoe Makers	24	71	9	80	75
Brass and Iron Founders	2	10	...	10	3
Brush and Basket Makers	4	9	...	9	19
Cabinetmakers, Upholsters, and French Polishers	14	75	...	75	41
Carpenters and Builders	23	64	...	64	41
Carpet Making and Upholstery	5	3	25	28	8
Needlework	1	...	...	...	...
Carvers and Gilders	1	3	...	3	2
Cigarette Making	2	1	8	9	2
Clay Pipe Makers	1	5	1	6	2
Confectioners and Sugar Boilers	2	5	...	5	4
Cork Makers	1	1	...	1	2
Coopers	1	2	...	2	1
Corsetieres	1	...	3	3	3
Cycle Makers	15	37	...	37	17
Dress, Mantles, and Millinery	79	...	710	710	253
Electricians	2	8	...	8	4
Engravers	1	3	...	3	4
Feather Dressers and Furriers	3	2	6	8	7
Flag and Banner Makers	1	...	11	11	2
Gut Scrapers and Tallow Melters	2	8	...	8	6
Masons (Stone)	7	27	...	27	13
Mineral Water Works	1	4	18	22	1
Organ Builders	1	3	...	3	3
Painters and Decorators	8	20	...	20	23
Perfumiers	1	7	12	19	2
Photographers	9	16	27	43	24
Picture Frame Makers	4	13	...	13	5
Plumbers and Gasfitters	8	23	...	23	10
Rag Pickers	2	4	11	15	20
Restaurant Kitchens	5	40	3	43	20
Rope and Block Makers	2	35	...	35	4
Saddlers and Harness Makers	10	28	...	28	14
Sail Makers	3	33	...	33	4
Seedsmen	1	13	26	39	1
Ship, Yacht, and Boat Builders	3	26	...	26	10
Shirtmakers	1	4	...	4	1
Tailors	85	155	190	345	369
Ticket Writers	4	12	...	12	4
Tin Plate Workers	10	42	...	42	9
Trunk and Bag Makers	2	6	...	6	7
Umbrella Makers	1	1	2	3	3
Undertakers	6	12	...	12	8
Weight and Scale Makers	2	10	...	10	2
Wholesale Chemists	1	4	5	9	4
Wine and Beer Bottlers	6	27	...	27	12
Watchmakers and Jewellers	9	19	...	19	12
	411	1,045	1,071	2,116	1,154

NUISANCES ABATED IN WORKSHOPS DURING YEAR.

Drains relaid, trapped and ventilated	...	...	16
Drains intercepted from sewer	...	...	5
New inspection chambers constructed	...	...	8
Drains repaired and cleared...	...	...	4
Water closets constructed ...	...	...	2
,, reconstructed or repaired	...	...	19
New pans fitted to water closets	...	...	3
Water closets ventilated ...	...	...	2
,, cleansed, cisterns repaired, and new cisterns fitted	...	...	22
New floors laid to water closets	...	...	4
New sinks, sink wastes, bath wastes, etc., fitted	...	...	4
Sink wastes disconnected from drains	...	...	5
Yard pavings relaid or repaired	...	...	8
Defective roofs, eaves guttering, etc., repaired	...	...	8
Defective ventilation remedied	...	...	4
Overcrowding abated	...	...	5
Rooms cleansed and limewashed	...	...	45
Dust nuisance in carding room abated	...	...	1
Smoke nuisances abated	...	...	3
Accumulations of manure, etc., removed	...	...	4
New manure vault constructed	...	...	1
Stables paved and drained ...	...	...	2
 Total	...	...	175

SAFETY FROM FIRE.

The following workshops not being provided with proper means of escape in case of fire, received notices, and carried out the following work :—

Workshop. M. & Son., One door of No. 1 Workroom on 2nd floor, two doors of No. 2 Workroom on third floor, and one door of No. 7 Workroom on third floor, are hinged so as to open outwards.

Workshop. T. & G.,
Above Bar Street.

No. 1 Room, west door hinged to open outwards to passage. No. 4 Room, north door hinged to open outwards to passage. No. 5 Room, north door hinged to open outwards to passage.

Workshop. J. & Co.,
East Street.

The door forming communication between department on 2nd floor and passage leading to Nos. 2 and 3 rooms, is hinged with double spring hinges so as to open both ways, and the doors of Nos. 1, 2, 3, 4, and 5 Work-rooms are hinged to open outwards.

BAKEHOUSES.

Bakehouses are either factories or workshops within the meaning of the Act according as mechanical power is or is not used in aid of the processes carried on, and are therefore subject to the general provisions of the Act.

A general power is given to the Council in the case of any bakehouse which is in such a state as to be on sanitary grounds unfit for use as a Bakehouse, to bring the same before a court of summary jurisdiction.

The Act provides that after 1st January, 1904, it will not be lawful to use any underground bakehouse (whenever established) unless the Council is satisfied that it is suitable, and has given a certificate of suitability.

There are 131 bakehouses on the Register, giving employment to 223 male workers. Seven hundred and fifty-nine visits have been made during the year, and 98 nuisances abated (see tables).

The whole of the bakehouses were re-lime-washed in the months of April and October in accordance with the Regulations.

There are ten underground bakehouses in use, viz :—

NAME.	ADDRESS.
E. W.	Bridge Street.
R. H. R.	East Street.
H. M.	London Road.
G. H.	Bedford Place.
E. D.	Carlton Place.
F. M.	Dorset Street.
D. L.	Bevois Valley Road.
J. E. M.	Commercial Road.
L. & Co.	Fourposts Hill.
C.	Lower Bridge Road.

TABLE (C)—BAKEHOUSES.

	No. on Register.	No. of Employés.			No. of Visits during Year.
		Males.	Females.	Total.	
Factories	1	5	—	5	4
Workshops	130	218	—	218	755
	131	223	—	223	759

NUISANCES ABATED IN BAKEHOUSES DURING YEAR.

Drains relaid, trapped and ventilated...	...	...	3
,, intercepted from sewer	...	...	1
New inspection chamber constructed	...	...	1
Drain openings inside bakehouses closed	...	...	21
Water closets reconstructed	...	...	2
New pans fitted to water closets	...	...	1
Water closets ventilated	...	...	3
,, cleansed, cisterns repaired, &c.	...	...	6
New soil pipe erected	...	...	1
New sink and bath waste fitted	...	...	2
Sink wastes disconnected from drains	...	...	5
Surface water channel relaid	...	...	1
Yard paving relaid or repaired	...	...	14
Yards cleansed and refuse removed	...	...	2
Floor of bakehouse relaid	...	...	1
Defective roofs, eaves, guttering repaired	...	...	8
,, ventilation remedied	...	...	15
Rooms cleansed and limewashed (after notice)	...	...	8
Accumulation of manure, &c., removed	...	...	1
Insanitary bakehouses closed	...	...	2
Total	...	...	98

LAUNDRIES.

There are 31 laundries on the Register, 5 of which use mechanical power and 26 use hand power. They employ 30 male and 299 female workers. 100 inspections have been made during the year, and 13 nuisances abated (see tables).

TABLE (D)—LAUNDRIES.

	No. on Register.	No. of Employés.			No. of Visits during Year.	
		Male.	Female.	Total.		
Factories	5	17	163	180	17
Workshops	26	13	136	149	83
		31	30	299	329	100

NUISANCES ABATED IN LAUNDRIES DURING YEAR.

New pan fitted to water closet	...	...	...	1
Water closets cleansed, cisterns repaired, &c.			...	3
New floor laid to wash-houses	...	...	...	2
Rooms cleansed and limewashed after notice	...		...	6
Smoke nuisance abated	...	...	...	1
Total		...	...	13

HOME WORK

According to the requirements of the Act, we received lists on or before the 1st February and August of persons receiving work or employed as outworkers. In the former month 32 lists were received containing 145 names and addresses, and during the latter month 36 lists, containing 169 names and addresses.

Forty-one of the latter represented premises registered as workshops, and employing labour, while five have removed or given up work. Of the remaining 123, 118 are tailors, 2 bootmakers, and 3 upholstery needleworkers.

They are situated as follows :—

• Town District	...	...	..	73
Northam and Chapel	...	...	..	26
Bevois Town and Portswood		...	..	10
Freemantle and Shirley	...	...	..	14
			—	
	Total	...	123	

The names of five outworkers, with places of employment, have been forwarded to the clerks of the different districts outside the Borough, in accordance with Sec. 107 of the Factory and Workshop Act, 1901.

Defects Remedied.

Drains relaid, trapped and ventilated	...	...	..	2
Drains intercepted from sewer	...	...	..	1
New inspection chamber constructed	...	...	..	1
Waterclosets reconstructed	...	...	..	2
New pans fitted to water closets	...	...	..	2
New cement floor laid to water closet	...	...	..	1
Sink waste disconnected from drains	...	...	..	2
New sink waste fitted	...	...	..	2
Premises cleansed and limewashed	...	...	..	3
			—	
	Total	...	16	

Infectious Disease has occurred in two houses where outworkers reside, viz. :—

- 1, Lower Bridge Road—1 case scarlet fever. Patient removed to Isolation Hospital, premises disinfected, and contacts kept under observation.
- 17, Bevois Street—2 cases diphtheria do. do.

In both cases the work was suspended until all danger from infection had ceased.

APPENDIX B.—CONTENTS.

SYNOPSIS OF TABLES.

- Table 1.—Showing births and birth rates for the whole Borough and various districts for ten years, 1893-1902.
- ,, 2.—Showing deaths and death rates for the whole Borough and various districts for ten years, 1893-1902.
- ,, 3.—Death from all causes at subjoined ages in the Borough of Southampton, from 1893-1902.
- ,, 4.—Causes of deaths in Southampton for ten years, 1893-1902.
- ,, 5.—Showing population, birth rates, death rates, zymotic death rates, infantile mortality, and marriage rates in Southampton and England and Wales for twenty years, 1883-1902.
- ,, 6.—Table prepared in accordance with Local Government Board's instructions. Showing population, births, and deaths for ten years.
- ,, 6A.—Ditto. Showing population, births, and deaths in the various districts of the Borough for ten years.
- ,, 6B.—Ditto. Showing cases of infectious diseases notified during 1902, Classified according to ages and localities, and the number removed to Hospital.
- ,, 6C.—Ditto. Showing deaths occurring in 1902, Classified according to diseases, ages, and localities.
- ,, 7.—Deaths from zymotic diseases for five years.
- ,, 8.—Comparative mortality of Southampton with other towns.
- ,, 9.—Showing causes of, and ages of all deaths occurring in the Borough of Southampton during the year 1902.
- ,, 10.—Showing marriage rate, birth rate, death rate, zymotic death rate, and infantile mortality in the registration districts of the Borough for the year 1902.
- ,, 11.—Showing number and description of cases of infectious disease notified to the Medical Officer of Health in each of the four quarters of 1902.
- ,, 12.—Showing all diseases notified during the past ten years, and the number of them admitted to Hospital.
- ,, 13.—Vaccination returns for Town proper.
- ,, 14.—Abstract from the meteorological Register kept at the Ordnance Survey Office, Southampton, during the year 1902.

APPENDIX B.

The Totals for 1902 include the 53 weeks ending 3rd January, 1903.

NOTE.—The totals in the following Tables (where not otherwise stated) include Deaths of Non-Residents, but the various Death Rates are calculated upon corrected totals.

TABLE 1.

SHOWING BIRTHS AND BIRTH RATES FOR THE WHOLE BOROUGH AND
VARIOUS DISTRICTS FOR 10 YEARS—1893—1902.

Year.	Whole Borough.				Town Proper		Portswood.		Shirley and Freemantle.	
	Males	Females	Total births	Birth rate.	Total births	Birth rate.	Total births	Birth rate.	Total births	Birth rate.
1893	1018	997	2015	29.50	1704	29.90	311	28.01	...	..
1894	1097	1016	2113	30.19	1797	30.98	316	26.33	...	...
1895	1085	1095	2180	30.38	1874	31.90	306	23.54	...	...
1896	1467	1392	2859	30.36	1912	32.13	368	25.82	579	28.38
1897	1458	1479	2937	30.43	1886	31.43	439	28.78	612	28.73
1898	1545	1400	2945	29.76	1847	30.55	479	29.94	619	28.51
1899	1534	1461	2995	29.55	1803	29.61	508	30.32	684	28.86
1900	1477	1452	2929	28.30	1751	28.58	484	27.65	694	28.04
1901	1597	1544	3141	29.77	1812	29.44	542	29.86	787	30.50
1902	1593	1559	3152	28.77	1764	28.01	564	29.22	824	30.23
Average 7 years.	1524	1469	2994	29.56	1825	29.95	483	28.79	685	29.03

TABLE 2.

SHOWING DEATHS AND DEATH RATES FOR THE WHOLE BOROUGH AND
VARIOUS DISTRICTS FOR 10 YEARS—1893—1902.

Year.	Whole Borough.				Town Proper		Portswood.		Shirley and Freemantle.	
	Males	Females	Total deaths	Death rate.	Total deaths	Death rate.	Total deaths	Death rate.	Total deaths	Death rate.
1893	704	666	1370	19.52	1230	20.93	140	12.61	...	..
1894	629	532	1161	15.99	1020	16.86	141	11.75	...	...
1895	716	679	1395	18.69	1240	20.18	155	11.92	...	..
1896	837	820	1657	17.15	1170	18.77	188	13.54	299	14.95
1897	864	847	1711	17.34	1209	19.73	191	12.98	311	15.11
1898	882	874	1756	17.25	1222	18.94	229	15.00	305	14.31
1899	1072	920	1992	19.08	1402	21.82	246	14.92	344	14.98
1900	930	891	1881	17.59	1325	20.36	218	12.97	338	13.99
1901	931	858	1789	16.48	1188	18.23	221	12.84	380	14.92
1902	910	816	1726	15.47	1137	17.19	229	12.53	360	13.72
Average 7 Years.	921	861	1787	17.19	1236	19.29	217	13.51	334	14.57

TABLE 3.

DEATHS FROM ALL CAUSES AT SUBJOINED AGES IN THE COUNTY BOROUGH OF SOUTHAMPTON, FROM 1893 TO 1902.

Year.	At all Ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and upwards.
1893	1370	317	167	58	61	401	366
1894	1161	253	119	58	53	337	341
1895	1395	359	149	43	59	377	428
1896	1657	420	218	72	73	453	421
1897	1711	457	211	60	54	421	508
1898	1756	452	171	85	65	497	486
1899	1992	534	211	77	66	533	571
1900	1881	448	182	64	65	543	579
1901	1789	484	124	56	73	511	541
1902	1726	390	171	65	71	508	521

TABLE 4.

CAUSES OF DEATHS IN SOUTHAMPTON FOR TEN YEARS, 1893 TO 1902.
(EXCLUDING DEATHS OF NON-RESIDENTS).

Causes.	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Small Pox	7	3	...	...	...	...	...	...	1	..
Scarlet Fever	4	3	13	39	11	3	1	2	...	5
Diphtheria	8	5	5	9	10	58	51	24	9	24
Enteric Fever	19	13	7	11	6	23	18	13	7	15
Continued Fever	...	...	...	...	1	...	...	...	...	...
Puerperal Fever	1	1	5	5	1	1	1	...	2	5
Erysipelas	5	5	...	6	1	2	4	5	4	2
Measles	45	13	14	61	47	16	30	51	6	50
Whooping Cough	15	31	7	22	61	26	40	19	20	43
Diarrhoea and Dysentery	54	12	64	50	80	134	152	48	131	22
Rheumatic Fever	3	8	7	2	6	2	7	4	3	...
Influenza	5	13	18	5	16	15	22	52	17	11
Phthisis	99	105	109	141	136	132	161	149	144	161
Cancer	66	63	61	77	66	96	89	79	101	88
Bronchitis, Pneumonia, & Pleurisy	245	189	239	247	265	218	299	302	288	294
Heart Diseases	96	82	109	124	117	162	158	171	130	158
Violence	39	39	48	48	39	48	45	53	42	42
All other Diseases	626	534	635	768	811	771	856	848	834	775
Totals	1337	1119	1341	1615	1674	1707	1934	1820	1739	1695

TABLE 5.

SHOWING POPULATION, BIRTH RATES, DEATH RATES, ZYMOTIC DEATH RATES, INFANTILE MORTALITY IN SOUTHAMPTON AND ENGLAND AND WALES FOR TWENTY YEARS, 1883-1902.
AND MARRIAGE RATES

Year.	Population	Births.		Deaths.		Zymotic Deaths.		Infantile Mortality Deaths under 1 year per 1000 Births Registered.		Marri- age Rate England and Wales.		
		Total Births.	Birth Rate England rate.	Birth Rate England and Wales.	Total Deaths.	Death Rate.	Zymotic Death Rate.	Zymotic Death Rate England and Wales.	Total Marri- ages.	Marri- age Rate.	Total Marri- ages.	Marri- age Rate England and Wales.
1883	61,105	2,122	34.7	33.2	1,283	20.6	19.5	16.8	2.79	2.20	137	—
1884	61,653	1,966	31.9	33.5	1,052	16.7	19.6	7.5	1.21	2.64	114	—
1885	62,160	1,914	30.8	32.5	1,190	18.9	19.0	14.6	2.34	2.19	146	138
1886	62,668	1,926	30.7	32.4	1,153	18.0	19.3	7.1	1.13	2.36	140	150
1887	63,215	1,979	31.3	31.4	1,214	18.7	18.8	13.5	2.13	2.29	145	145
1888	63,742	1,996	31.3	30.5	1,094	16.9	17.9	9.4	1.47	2.10	126	144
1889	64,270	1,966	30.6	30.6	1,081	16.3	17.8	8.5	1.32	1.77	117	144
1890	64,797	1,848	28.5	29.7	1,168	17.5	19.2	8.2	1.26	2.03	129	151
1891	65,325	2,045	31.3	31.4	1,191	18.0	20.2	4.7	0.72	1.83	123	149
1892	66,650	1,911	28.6	30.5	1,466	21.5	19.0	7.9	1.15	1.90	148	148
1893	68,200	2,015	29.5	30.8	1,370	19.5	19.2	15.7	2.32	2.52	157	159
1894	70,000	2,113	30.2	29.6	1,161	16.0	16.6	8.1	1.14	1.88	119	137
1895	71,750	2,180	30.4	30.3	1,395	18.7	18.7	11.1	1.53	2.21	155	161
1896	94,150	2,859	30.4	29.7	1,657	17.2	17.1	19.2	2.04	2.17	146	148
1897	96,500	2,937	30.4	29.7	1,711	17.3	17.4	21.7	2.04	2.15	156	156
1898	98,950	2,945	29.8	29.4	1,756	17.3	17.6	26.7	2.63	2.21	153	161
1899	101,350	2,995	29.6	29.3	1,992	19.1	18.3	29.7	2.88	2.19	178	163
1900	103,500	2,929	28.3	28.9	1,881	17.6	18.3	16.3	1.51	1.99	152	154
1901	105,500	3,141	29.4	28.5	1,789	16.5	16.9	17.3	1.64	2.05	154	151
1902	107,833	3,152	28.8	28.6	1,726	15.5	16.3	15.9	1.45	1.64	124	133
Average 20 years		2,347	30.3	30.5	1,416	17.9	18.4	140	1.75	2.11	141	144
											694	17.2
												15.8

NOTE.—The zymotic deaths and death rates include only the seven principal zymotic diseases, viz.:—whooping cough, measles, diarrhoea, diphtheria, scarlet fever, typhoid fever and small pox.

TABLE 6.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1902 AND PREVIOUS YEARS.

YEAR.	BIRTHS.	TOTAL DEATHS REGISTERED IN DISTRICT		1902		PREVIOUS YEARS.	
		Under 1 year of age.	At all Ages.	TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Residents registered in Public Institutions beyond the District.	NET DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	Rate.*
1	2	3	4	5	6	7	8
				Number.	Rate per 1,000 Births registered.	Number.	Rate.*
1892	66,650	1,911	28·6	283	148	1,466	22·0
1893	68,200	2,015	29·5	317	157	1,370	20·1
1894	70,000	2,113	30·2	253	119	1,161	16·6
1895	71,750	2,180	30·4	339	155	1,395	19·4
1896	94,150	2,859	30·4	420	146	1,657	17·6
1897	96,500	2,937	30·4	457	156	1,711	17·3
1898	98,950	2,945	29·8	452	153	1,756	17·7
1899	101,350	2,995	29·6	534	178	1,992	19·6
1900	103,500	2,929	28·3	448	152	1,881	18·2
1901	105,500	3,141	29·8	484	154	1,789	17·0
Averages for years 1892-1901	99,991	2,968	29·7	466	157	1,798	17·9
1902	107,833	3,152	28·8	390	124	1,726	15·8
						338	49
						56	25
						1,695	15·5
						1,748	17·5

* Rates in columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths included in column 7 of this table are the whole of those registered during the year as having actually occurred within the district. The deaths included in column 12 are the number in column 10 and the addition of the number in column 13.

TABLE 6 A.

VITAL STATISTICS OF SEPARATE LOCALITIES IN 1902 AND PREVIOUS YEARS.

YEAR.	WHOLE DISTRICT.	TOWN.	PORTSWOOD.		SHIRLEY.	
			DEATHS UNDER 1 AGEs.	DEATHS AT ALL AGES.	DEATHS UNDER 1 AGEs.	DEATHS AT ALL AGES.
1892	66,650	1,911	1,435	283	56,250	1,639
1893	68,200	2,015	1,333	317	57,000	1,704
1894	70,000	2,113	1,119	253	58,000	1,797
1895	71,750	2,180	1,341	339	58,750	1,874
1896	94,150	2,859	1,615	420	59,500	1,912
1897	96,500	2,937	1,674	457	60,000	1,886
1898	98,950	2,945	1,707	452	60,450	1,847
1899	101,350	2,995	1,934	534	60,900	1,803
1900	103,500	2,929	1,821	448	61,250	1,751
1901	105,500	3,141	1,739	484	61,550	1,812
Averages of Years 1896-1901.	99,991	2,968	1,748	466	60,608	1,835
1902	107,833	3,152	1,695	390	62,000	1,764
					16,316	302
					470	223
					65	65
					23,075	663
					340	99
					66	66
					26,833	824
					374	88

DEATHS UNDER
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OF EACH YEAR.DEATHS UNDER
1 AGE.

TABLE 6 B.
CASES OF INFECTIOUS DISEASE NOTIFIED DURING YEAR 1902.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.						NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.		
	At all ages.	At Ages—years.					Town.	Shirley.	Portswood.	Town.	Shirley.	Portswood.	Town.	Shirley.	Portswood.
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65									
Small Pox...	7	...	...	5	2	...	6	1	...	6	1	...	...	...	...
Cholera...	144	...	41	64	24	15	89	21	34	48	13	...	24	...	...
Diphtheria...	...	...	1	1	7	48	11	53	5	10	...	...	...	...	...
Membranous Croup	68	...	2	70	146	30	13	133	34	94	97	25	86	...	...
Bryosipelas...	261	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	123	...	9	44	26	42	2	99	13	11	61	5	9	...	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	1	...	1	...	1	...	1	...	1	...	2	...	...	...
Continued Fever	...	7	...	...	...	2	5	5	...	...	2	...	...	...	...
Puerperal Fever	...	208	31	93	81	1	2	155	28	25	...	...	...	...	...
Plague...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Chicken Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	819	34	213	337	95	127	13	541	102	176	212	44	119	...	...

*Chicken pox was compulsorily notifiable from March 17th to July 17th, 1902.

TABLE 6 C.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1902.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.						Deaths in or belonging to Localities at all ages.			TOTAL DEATHS IN PUBLIC INSTITUTIONS.	
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Town.	Portsmouth.	Shirley.	
Small-pox	50	11	33	5	1	..	..	25	4	21	..
Measles	5	..	1	4	..	..	..	5	..	..	5
Scarlet Fever	43	23	18	2	..	..	..	26	6	11	..
Whooping-cough	24	1	14	7	1	1	..	19	2	3	18
Diphtheria and Membranous Croup	..	..	..	..	..	..	..	..	..	..	..
Croup	..	..	..	..	..	..	..	..	..	..	..
Fever	15	..	2	3	5	5	..	10	2	3	11
Typhus	..	..	..	..	..	..	..	..	..	..	..
Enteric	..	..	..	..	..	..	..	..	..	..	..
Other continued	..	..	..	..	..	..	..	..	..	..	..
Epidemic Influenza	11	..	..	..	8	3	..	7	1	3	..
Cholera	..	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	22	18	3	..	..	1	..	17	4	1	..
Enteritis	14	9	1	..	..	4	..	6	3	5	..
Puerperal Fever	5	..	..	..	2	3	..	5	..	..	2
Erysipelas	2	..	..	..	..	..	2	2	..	..	1
Other septic diseases	10	6	..	..	1	3	..	9	1	..	5
Phthisis	161	1	2	5	31	118	4	119	16	26	43
Other Tubercular diseases	56	23	18	5	7	3	..	44	4	8	13
Cancer, malignant disease	88	..	..	..	1	57	30	49	15	24	20
Bronchitis	156	38	18	1	..	40	59	105	25	26	16
Pneumonia	131	34	28	2	1	48	18	77	23	31	12
Pleurisy	7	..	..	..	2	5	..	4	1	2	1
Other diseases of Respiratory organs	4	..	..	1	..	2	1	4	..	..	..
Alcoholism	6	..	..	..	..	6	..	5	..	1	4
Cirrhosis of Liver	14	..	..	..	..	11	3	9	3	2	3
Venereal diseases	8	4	..	..	4	..	..	5	1	2	4
Premature birth	83	83	..	..	..	..	..	46	14	23	..
Diseases and accidents of parturition	6	..	..	1	5	..	5	..	..	1	2
Heart diseases	158	..	3	4	80	71	102	25	31	44	..
Accidents	29	7	5	..	1	13	3	18	5	6	15
Suicides	10	..	..	..	..	9	1	5	1	4	2
All other causes	577	133	27	22	3	162	230	355	82	140	117
All causes	1695	391	170	60	68	584	422	1083	238	374	338

TABLE 7.

The total Deaths from the seven principal Zymotic Diseases amounted to 159, 44 being of a notifiable and 115 being of a non-notifiable character.

	1898	1899	1900	1901	1902	
Small Pox...	...	...	...	1	...	
Scarlet Fever	3	1	2	...	5	Notifiable under the Infectious Diseases (Notification) Act, 1889). Death Rate 0.40.
Diphtheria	58	51	24	9	24	
Enteric Fever	23	18	13	7	15	
Measles	16	30	51	6	50	
Whooping Cough	26	40	19	20	43	Not Notifiable under the said Act. Death Rate 1.05
Diarrhoea ...	134	152	48	131	22	
Totals ...	260	292	157	174	159	

TABLE 8.

COMPARATIVE MORTALITY OF SOUTHAMPTON WITH OTHER TOWNS

TOWN.	Estimated population 1902.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Infantile Mortality. Deaths under 1 year per 1,000 Births Registered.	Average Death Rate—10 Years, 1892-1901.
Aston Manor	78,481	29·4		1·9	129	16·4
Barrow-in-Furness	61,836	31·16	14·79	2·3	137	15·1
Birkenhead	112,102	32·52	17·74	2·4	151	18·88
Birmingham	528,181	31·9	18·0	2·6	157	20·2
Blackburn	130,239	25·7	17·2	1·9	157	21·3
Bolton	171,082	27·9	17·2	2·12	132	20·8
Bootle	60,000	32·4	18·9	2·7	154	19·9
Bradford	281,770	22·9	15·7	1·4	138·5	18·2
Brighton	124,539	24·3	15·8	1·26	125	17·6
Bristol	334,632	27·46	17·31	2·75	131	17·52
Burnley	99,000	29·3	19·1	3·5	176	20·0
Burton-on-Trent	50,973	26·7	13·18	1·12	113	
Bury	58,182	20·86	16·41	1·49	128	19·83
Cardiff	168,909	31·2	16·7	2·7	145	17·9
Coventry	71,745	28·3	14·0	1·1	107	16·7
Derby	116,869	28·46	14·03	1·25	122	16·8
East Ham	104,023	36·58	10·7	1·8	116·9	13·0
Gateshead	113,024	36·8	17·96	2·3	137	19·1
Halifax	105,950	20·3	15·2	0·85	152	17·6
Hanley	62,452	35·1	18·0	3·2	170	19·9
Huddersfield	95,010	24·37	17·73	1·61	138	18·21
Ipswich	67,840	27·6	14·2	1·03	118	19·0
Kingston-on-Hull	245,448	31·7	16·4	2·13	138	18·9
Leeds	437,036	29·8	17·6	2·03	160	19·7
Liverpool	710,337	34·2	21·6	3·4	162	23·4
Merthyr Tydvil	70,722	38·8	22·9	2·0	168	24·8
Middlesborough	93,354	36·09	20·48	2·4	182	20·79
Newport (Mon.)	68,862	32·8	15·8	1·82	125	17·7
Northampton	88,206	25·75	14·67	2·02	132	15·7
Oldham	138,091	26·1	19·1	2·0	148	21·2
Plymouth	110,066	26·86	16·99	1·72	155·5	19·28
Reading	73,901	25·66	13·57	1·34	119·7	14·87
Rhondda	117,007	42·1	19·2	3·02	178	20·5
Rochdale	84,075	24·3	17·9	1·40	127	18·9
St. Helens (Lancs.)	86,040	37·4	19·9	2·62	167	20·4
Salford	224,007	33·7	19·2	3·15	157	23·6
Southampton	107,833	28·8	15·5	1·45	124	17·45
Sheffield	418,765	33·3	16·9	1·79	150	20·4
South Shields	103,330	36·4	19·5	2·62	149	20·0
Stockport	94,422	27·59	19·39	1·90	183	22·1
Stockton-on-Tees	51,877	32·7	17·2	2·3	142	18·5
Sunderland	147,983	35·74	19·32	1·95	153	21·24
Swansea	95,150	30·7	16·1	1·4	136	19·2
Tynemouth	52,044	33·68	19·3	1·76	150	18·9
West Bromwich	65,938	34·6	19·8	2·6	162	19·3
West Ham	275,408	34·0	17·3	3·1	144	19·0
West Hartlepool	62,614	37·6	15·7	1·78	120	14·8
Wigan	61,827	37·42	20·25	3·27	158	21·49
Wolverhampton	95,736	31·6	16·2	1·71	137	20·58
Great Yarmouth	51,750	27·36	16·46	1·68	145	18·17
York	79,114	28·8	15·6	1·34	116	18·5

TABLE 9.

TABLE SHOWING ALL DEATHS REGISTERED IN THE COUNTY BOROUGH OF SOUTHAMPTON, DURING THE
53 WEEKS ENDING 3rd JANUARY, 1903, CLASSIFIED ACCORDING TO DISEASES AND AGES.

DISEASES CLASSIFIED.	AGES.										SEX.				TOTALS.
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 to 96	96 Pure Spred D	Males	Females
Measles	11	33	5	4	...	1	...	...	...	...	...	...	32	18	50
Scarlet Fever	1	4	...	1	4	3	2	...	1	...	3	2	5
Influenza	23	18	2	...	1	1	...	...	...	...	...	...	7	4	11
Whooping Cough	1	14	7	1	...	1	...	3	...	...	...	...	18	25	43
Diphtheria	1	2	3	8	3	5	...	...	...	...	9	15	24
Enteric Fever	18	3	...	...	1	...	...	...	...	...	16	8	24
Diarrhoea and Dysentery	3	...	...	...	1	1	1	1	...	...	13	9	22
Syphilis	3	...	1	...	...	...	...	...	...	...	2	1	3
Inherited Syphilis	3	...	1	...	...	...	...	...	...	...	4	4	4
Phagedena	1	...	...	2	3	...	...	...	1	1	...	1	1
Erysipelas	1	...	1	...	1	...	1	...	...	...	2	2	2
Puerperal Fever	1	...	1	...	1	...	1	...	...	...	1	1	1
Pyrexia, Septicæmia	1	...	1	...	1	...	1	...	...	...	1	1	1
Cellulitis	3	...	...	...	1	...	1	...	...	...	2	2	2
Stomatitis	1	...	1	...	...	...	2	1	3
Malignant Endocarditis	1	...	1	...	...	...	...	...	...
Tubercular Meningitis	5	8	1	1	30	34	42	27	15	4	...	10	5
Phthisis	1	2	5	...	1	...	1	2	...	...	90	70	160
Tabes Mesenterica	12	4	...	1	...	...	...	...	...	...	10	6	16
Tubercular Peritonitis	5	5	2	4	1	2	2	...	...	...	13	8	21
General Tuberculosis	1	1	1	2	1	1	1	...	...	...	1	1	2
Tubercular Caries	1	1	1	2	...	...	...	...	...	...	1	1	3
Serofilia	1	1	1	2	...	...	...	...	...	...	1	1	1
Other forms of Tuberculosis	1	...	...	...	...	...	...	...	...	...	1	1	1
Thrush	1	...	...	...	...	...	...	...	...	...	1	1	1
Chronic Alcoholism	3	2	4

TABLE IX.—CONTINUED.

DISEASES	CLASSIFIED.	AGES.										SEX.		TOTALS.
		0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	Males.	Females.	
Rheumatism	2	1	3
Gout	1	1	91
Cancer	54	1	54
Cyst	37	1	37
Diabetes Mellitus	4	6	10
Purpura Hæmorrhagica	1	1	2
Pernicious Anæmia	1	1	2
Lymphadenoma	1	1	1
Premature Birth
Injury at Birth	1	1	1
Atelecrasis	3	5	5
Malformation of Heart	2	2	2
Spina Bifida	4	1	5
Imperforate Anus	1	1	1
Cleft Palate	1	1	1
Other Malformations	1	1	1
Want of Breast Milk	2	2	2
Atrophy, Debility, and Marasmus	34	23	57
Dentition	8	12	20
Rickets	5	4	9
Old age	32	69	101
Convulsions	15	14	29
Meningitis	8	13	21
Cerebral Abscess	3	3	3
Apoplex	38	39	77
Softening of Brain	6	2	8
Hemiplegia, Paralysis	1	1	1
General Paralysis of Insane	1	1	1
Chorea	1	1	1

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TABLE IX.—CONTINUED.

DISEASES CLASSIFIED.	AGES.										SEX.			TOTALS.
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	Males	Females		
Epilepsy...	1	...	...	1	2	1	1	2	1	1	2	2	6	8
Locomotor Ataxy...	1	...	1	...	...	1	...	1	2	1	1	1	1	3
Paraplegia, Disease of Spinal Cord...	1	2	1	1	...	2	2	2
Peripheral Neuralitis...	1	1	1	1	1	2	5	7	7
Serous Apoplexy...	1	1	1	1	1	1	1	1	2
Progressive Muscular Atrophy...	1	1	1	1	1	1	1	1	4
Cerebral Tumour...	...	1	...	3	...	...	1	1	1	1	3	1	1	1
“Clot of Blood on Brain”...	...	1	...	...	...	...	...	...	...	...	1	1	1	1
Otitis, Otorrhoea...	3	...	1	...	...	...	...	2	2	2	4
Mastoid Abscess...	1	...	...	...	...	...	...	1	1	1	1
Pericarditis...	2	1	5	4	8	12	11	9	1	2	1	3
Endocarditis, Valvular Diseases of Heart...	2	2	1	2	2	5	3	1	...	30	24	54
Fatty Degeneration of Heart...	1	1	2	1	3	...	8	6	14
Dilatation of Heart...	2	2	12	11	16	25	15	...	6	2	8
“Heart Disease,” (form not stated)...	1	...	1	...	...	...	48	37	85
Rupture of Heart...	1	...	...	...	1	1	1	1
Rupture of Artery...	1	...	1	1	1	1	1	1
Rupture of Vena Cava...	1	1	2	4	1	1	9	3	9
Aneurysm...	1	1	1	1	1	1	1	1	1
Embolism, Thrombosis...	1	1	2	3	1	1	3	6
Atheroma...	1	2	1	...	2	1	2
Phlebitis...	1	2	1	...	1	1	3
Angina Pectoris...	1	1	1	1	1	1	1	1
Senile Gangrene...	1	1	1	4	3	4	7	11
Syncope...	1	...	1	1	1	1	1	1
Tracheitis...	38	18	1	...	...	2	4	3	23	4	34	1
Acute Bronchitis...	1	...	1	5	8	20	24	42	69
Chronic Bronchitis...	1	1	1	...	1	1	86

TABLE IX.—CONTINUED.

DISEASES	CLASSIFIED.	AGES.										SEX.		TOTALS.
		0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	Males.	Females	
Broncho Pneumonia	...	23	19	1	1	2	11	14	7	10	5	1	...	24
Pleuro Pneumonia	11	9	1	2	2	2	2	1	5	1	...	2
Pneumonia	1	1	...	1	...
Pleurisy, Empyema	1	1	1
Empysema, Asthma	1	1	1
Perichondritis	1
Tonsillitis	1	...	...	1	...	...	1	...	1
Stricture of Oesophagus	1	3	1	1	1	1	...	2
Ulcer of Stomach	1	1	1	1	1	1	1	1	1	1	4
Gastritis	2	1	1	1	1	1	1	1	1	1	6
Gastro Enteritis	7	1	1	1	1	1	1	1	1	1	7
Enteritis	1	1	1	1	1	1	1	1	1	1	9
Colitis	2	1	1	1	1	1	1	1	1	1	1
Appendicitis	1	1	1	1	1	1	1	1	1	1	1
Typhilitis, Perityphilitis	1	1	2	1	1	1	1	1	1	1	2
Peritonitis	1	1	1	1	1	1	1	1	1	1	3
Hernia	1	1	1	1	2	1	2	1	1	1	2
Obstruction of Intestine	1	1	1	1	1	1	1	1	1	1	8
Intussusception	1	1	1	1	1	1	1	1	1	1	1
Cirrhosis of Liver	1	1	1	1	1	1	1	1	1	1	5
Hepatitis	1	1	1	1	1	1	1	1	1	1	3
Jaundice	1	1	1	1	1	1	1	1	1	1	1
Atrophy of Liver	1	1	1	1	1	1	1	1	1	1	1
Abscess of Liver...	1	1	1	1	1	1	1	1	1	1	1
Tumour of Liver...	1	1	1	1	1	1	1	1	1	1	1
Atrophy of Stomach	1	1	1	1	1	1	1	1	1	1	1
Sea Sickness	1	1	1	1	1	1	1	1	1	1	1
Addison's Disease	1

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TABLE IX.—CONTINUED.

DISEASES CLASSIFIED.	AGES.										SEX.		TOTALS.
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	Males.	Females.	
Exophthalmic Goitre	1
Goitre...	1
Mediastinal Tumour	1
Acute Nephritis	1	1	...	...	2	1	...	2	...	4	5
Bright's Disease	6	1	...	14	15	29
Calculus	1	2	...	1	3	3
Cystitis	1	...	...	2	...	2
Extravasation of Urine	1	...	...	1	...	1
Hæmaturia	1	...	1	1
Pyleitis	1	...	1	1
Perineal Fistula	1	...	1	1
Tumour of Bladder	1	...	2	2
Prostatitis	1	...	2	2
Ovarian Tumour...	1	...	1	...	1	1
Ovarian Cyst	1	...	1	...	1	1
Abscess of Breast	1	...	1	...	1	1
Tumour of Uterus	1	...	1	...	1	1
Parturition :-	1	...	1	1
Abortion	1	...	1	...	1	1
Puerperal Mania	1	...	1	...	2	2
Placenta Prævia	1	...	1	...	1	1
Pelvic Cellulitis	1	...	1	...	1	1
Pelvic Abscess	1	...	1	...	1	1
Ostitis, Periostitis	1	...	1	...	1	2
Necrosis	1	...	1	...	1	1
Spinal Caries	1	...	1	...	1	1
Epiphysitis	1	...	1	...	1	1

TABLE IX.—CONTINUED.

DISEASES	CLASSIFIED.	AGES.										SEX.		Totals.
		0	1	5	15	25	35	45	55	65	75	Males.	Females	
Tumour of Spine	1	...	...	...	...	...	1	...	...	1	...	1
Psoas Abscess	1	...	...	...	...	...	...	...	...	1	...	1
Eczema	1	...	...	...	...	...	...	...	...	1	...	2
Pemphigus	1	...	...	...	...	...	...	...	...	1	...	1
Deaths from External Causes:														
By Accident or Negligence:—														
In Vehicular Traffic	1	...	1	...	1	...	1	...	...	2	1	3
On Railways	1	...	1	...	1	...	1	...	...	1	...	1
On Ships, Boats, and Docks, excluding	2	1	1	4	1	2	...	...	...	8	3	8
Drowning	2	1	1	1	1	1	1	1	...	3	1	6
By Burns and Scalds	2	1	1	1	1	1	1	1	...	1	1	1
” Surgical Narcosis	3	1	1	1	1	1	1	1	...	3	1	4
” Drowning	3	1	1	1	1	1	1	1	...	1	2	3
” Suffocation, overlaid	1	1	1	1	1	1	1	1	...	3	2	5
” Falls, ” otherwise	1	1	1	1	1	1	1	1	...	7	4	11
” Neglect at Birth	1	1	1	1	1	1	1	1	...	1	1	1
Homicide:—														
” Wilful Murder	...	2	...	...	1	...	...	...	...	...	...	2	2	2
Stab	...	1	...	...	1	...	...	...	...	...	...	1	1	1
Suicide:—														
By Poison	1	1	1	1	1	1	1	3	4	3
” Hanging	1	1	1	1	1	1	1	1	1	1
” Shooting	1	1	1	1	1	1	1	1	1	1
” Cut or Stab	1	1	1	1	1	1	1	1	1	1
” Found Dead”	1	1	1	1	1	1	1	1	1	1

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TABLE 10.

SHOWING MARRIAGE RATE, BIRTH RATE, DEATH RATE, ZYMIC DEATH RATE, AND INFANTILE MORTALITY FOR THE REGISTRATION DISTRICTS OF THE BOROUGH, FOR THE YEAR 1902.

District.	Marriage Rate.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Infantile Mortality (Deaths under One Year per 1,000 Births registered).
Whole Borough ...	17.92	28.77	15.47	1.45	123.7
Town Proper ...	20.81	28.01	17.19	1.62	133.8
Portswood and Bitterne Park	10.84	29.22	12.33	0.93	117.0
Shirley, Freemantle, and Millbrook ...	16.25	30.23	13.72	1.43	106.8

TABLE 11.

SHOWING NUMBER AND DESCRIPTION OF CASES OF INFECTIOUS DISEASE OCCURRING IN THE BOROUGH NOTIFIED TO THE MEDICAL OFFICER OF HEALTH IN EACH OF THE FOUR QUARTERS OF 1902.

CASES IMPORTED BY VESSELS AND REMOVED FROM OTHER DISTRICTS FOR ISOLATION ARE NOT INCLUDED IN THIS TABLE.

DISEASES.	Quarter ending.				Total for Year.	Mortality.
	March 29th	June 28th	Sept. 27th	Jan. 3rd 14 weeks		
Small Pox ...	3	3	1	...	7	0
Scarlet Fever ...	26	44	53	138	261	5
Diphtheria ...	23	39	39	43	144	24
Enteric Fever ...	5	10	61	48	124	15
Puerperal Fever ...	1	2	3	1	7	5
Erysipelas ...	14	16	21	17	68	2
Chicken Pox ..	26	145	37	...	208	0
Total ...	98	259	215	247	819	51

TABLE 12.

SHOWING ALL DISEASES NOTIFIED DURING THE PAST TEN YEARS, AND ADMISSIONS TO HOSPITAL AND HOSPITAL SHIPS, INCLUDING NOTIFICATION AND ISOLATION OF CASES IMPORTED BY VESSELS AND REMOVED FROM NEIGHBOURING DISTRICTS.

DISEASES.	1893.		1894.		1895.		1896.		1897.		1898.		1899.		1900.		1901.		1902.		
	Notifications.		Admissions.		Notifications.		Admissions.		Notifications.		Admissions.		Notifications.		Admissions.		Notifications.		Admissions.		
Small Pox	125	152	17	18	6	6	11	9	7	7	17	17	145	145	22	22	7	7	9	9	
Cholera	...	...	1	1	39	39	50	50	53	53	...	...	...	...	...	...	91	61	144	95
Diphtheria	51	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Membranous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	2	...	...	1	1	3	3	6	6	2	4	4	41	41	1	1	54	1	68	...
Scarlet Fever	109	...	...	63	1	53	198	82	53	141	256	176	294	148	64	...	87	87	261	...
Typhoid Fever	97	...	...	79	5	352	59	79	59	68	1	169	188	188	...	...	118	147	124	214
Puerperal Fever	107	...	...	78	2	4	4	8	8	2	...	...	5	5	...	...	13	13	116	105
Measles	3	2	...	3	7	28
Suspected	1	1	1	1	...
Plague: Adenitis	2
Plague	5
Chicken Pox	208
Other Diseases
Total	494	156	281	29	516	204	1140	281	426	151	632	196	755	148	566	286	421	281	458	819	

TABLE 13.
VACCINATION RETURNS FOR TOWN PROPER.

Year.	Births.	Successfully Vaccinated.	Died Un- vaccinated.	Insuscept- ible to Vac- cination.	Postponed and whereabouts unknown, or re- moved to other districts and exempt under Sec. 2 Vaccination Act, 1898.	Total.
1888	1710	1391	144	1	174	1710
1889	1660	1272	138	1	249	1660
1890	1535	1263	143	3	176	1535
1891	1714	1365	157	4	188	1714
1892	1646	1312	178	8	147	*1646
1893	1701	1407	180	16	93	1701
1894	1796	1483	184	28	95	1796
1895	1874	1557	207	16	94	1874
1896	1912	1574	231	18	89	1912
1897	1886	1572	195	15	102	1886
1898	1847	1484	215	19	129	1847
1899	1802	1417	244	12	129	1802
1900	1751	1408	217	7	119	1751
1901	1821	1433	203	6	124	1821

* One Child had Small Pox.

TABLE 14.

ABSTRACT FROM THE METEOROLOGICAL REGISTER KEPT AT THE ORDNANCE SURVEY OFFICE,
SOUTHAMPTON, DURING THE YEAR 1902.

Month.	BAROMETER CORRECTED & REDUCED TO 32° MEAN SEA LEVEL.			TEMPERATURE.			RAINFALL.			RECORDED SUNSHINE.			REMARKS.										
	Mean at 9 a.m.	Inch.	Inch.	Date.	Mean at 9 p.m.	Max. in Air.	Min. in Air.	Approx. Mean.	Highest Minimum.	Lowest Minimum.	Total in inches.	Greatest quantity in 24 hours.	Date.										
Jan.	30.207	30.217	30.284	15	29.262	25	41.5	41.1	37.6	42.355	4	3	1.060	0.355	1	9	52.9	8.1	29				
Feb.	29.875	29.855	30.614	1	29.267	26	35.2	36.4	41.6	37.0	52.6	28	22.1	16	1.674	0.460	23	12	74.0	7.8	9		
Mar.	29.888	29.884	30.279	17	29.189	24	45.7	45.0	53.9	39.3	46.8	62.6	31	29.2	6	2.446	0.810	14	12	107.1	9.1	25	
April	29.997	29.963	30.359	7	29.524	22	49.5	46.7	56.4	39.3	49.1	63.9	25	30.6	7	1.726	0.550	21	13	167.0	13.0	28	
May	30.015	30.001	30.500	25	29.348	17	53.2	49.1	59.1	42.7	50.8	72.3	24	32.4	14	2.876	0.80	17	22	170.1	14.2	27	
June	29.931	29.928	30.291	24	29.386	12	60.4	56.8	66.1	51.2	58.6	82.7	28	43.3	18	3.800	0.740	13	19	181.2	14.5	27	
July	30.060	30.057	30.330	3	29.501	26	64.8	60.6	72.0	52.9	62.4	85.4	15	45.8	19	1.725	0.370	19	12	228.5	14.0	8.14	
Aug.	29.951	29.949	30.238	22	29.655	16	62.7	59.5	69.7	54.3	62.9	79.4	29	46.3	11	3.333	0.690	18	18	154.3	11.9	22	
Sept.	30.088	30.034	30.496	26	29.632	3	59.3	55.5	66.3	50.2	58.2	72.5	8	39.5	19	1.303	0.330	11	14	172.6	11.4	8	
Oct.	30.003	30.020	30.599	24	29.472	10	51.5	49.7	58.1	44.8	51.4	66.6	10	36.3	31	2.332	0.600	15	13	86.9	8.7	21	
Nov.	29.883	29.875	30.385	14	29.153	25	45.6	45.7	51.6	41.6	46.6	61.2	1	28.8	18	3.271	0.560	24	16	63.7	7.3	18	
Dec.	30.087	30.119	30.559	23	28.954	29	41.4	41.4	46.4	37.5	41.9	56.1	17	22.0	7	1.860	0.670	1	10	43.3	6.5	2	
For the year.			29 Dec.			43.7			15 Jly			7 Dec.			17 May			170 May			1501.6 June		

This Table has been supplied by the courtesy of COLONEL DUNCAN A. JOHNSTON, R.E., Director-General of Ordnance Survey.

APPENDIX C.—CONTENTS.

The Borough Analyst's Report for the Year ending
December 31st, 1902.

ANALYST'S DEPARTMENT.

ANNUAL REPORT for the Year ending 31st December, 1902.

*To the Worshipful the Mayor, Aldermen, and Councillors
of the County Borough of Southampton.*

GENTLEMEN,

I have the honour to submit for your information an account of the work done in this department during the past year.

SECTION I.—SALE OF FOOD AND DRUGS ACT, 1875.

The number of samples submitted under the above Act during 1902 was two hundred and forty-one.

Of this number one hundred and seventy-two samples were submitted by Inspectors, forty-six by private persons, and twenty-three from the Borough of Newbury.

The character of the samples, the number of each article submitted, and the number and percentage of adulterated samples are given in the following table :—

TABLE I.

Character of Article.	Number of Samples.	Number of Samples Adulterated.	Per Centage of Adulterated Samples.
Butter	49	1	2·03
Coffee	21	—	—
Cream	1	—	—
Ground rice	4	—	—
Lard	6	—	—
Milk	121	6	4·96
" Condensed ...	5	—	—
" Condensed Skim...	1	—	—
Mustard	5	—	—
Oatmeal	12	—	—
P'epper	9	—	—
Tincture rheu...	1	—	—
Whisky	6	1	16·6
 Totals	241	8	3·31

The details as to adulterated samples taken within the Borough, also as to proceedings taken and the result in each case are given in Table II.

TABLE II.

Article Analysed.	No. on Register	Nature and Amount of Adulteration.	Proceedings taken.	Result.	
				Fine.	Costs.
Butter ...	4p.	Adulterated all foreign fat ...	Private	—	—
Milk ...	48	2·66% cream rem'd	Summoned	10/-	6·6
„ „	50	„ 3% added water ..	No proceedings	—	—
„ „	82	„ 15% „ „	Summoned	—	—
„ „	85	28% „ „ „	„	40/-	8·6
„ „	36p.	50% „ „ „	Private	—	—
„ „	8p.	18% „ „ „	„	—	—
Whisky	60	1·89% „ „ „	None	—	—

The total fines and costs during the year amounted to £3 5s. od.

BUTTER.

Forty-nine samples, or twelve samples less than in 1901, were analysed, and only one sample was adulterated. This does not really represent the actual state of things, as margarine is carried round the town in baskets and sold as butter. A few pats of butter are carried for Inspectors, and in consequence of the Magistrates having decided that the Inspector must take the pat handed to him by the Vendor and not take a sample from the basket, the Inspector is rendered powerless in these cases.

MILK.

The number of samples analysed is nine less than in 1901.

The marked decrease in the per cent. of adulterated samples during the two previous years is continued, and the per cent. of adulterated samples is the lowest yet recorded for Southampton.

COMPOSITIONS OF MILK SUPPLY.

There is a slight improvement in the average composition of the milk received during 1902, over that received in the previous year, but it is still below the average for the years 1899 and 1900.

Year ...	1898.		1899.		1900.		1901.		1902.	
Source ...	Inspectors.	Private.								
Total Solids	12.56	12.33	12.72	12.93	12.94	12.66	12.55	12.71	12.75	12.78
Fat	3.87	3.60	4.00	4.15	4.30	3.95	3.82	3.98	3.85	4.11

The general average of genuine samples was :—

	1898	1899	1900	1901	1902
Total Solids ...	12.5%	12.75%	12.90%	12.60%	12.77%
Fat ...	3.79%	4.02%	4.24%	3.88%	3.96%

The average composition of adulterated samples for the past five years has been :—

Year ...	1898.		1899.		1900.		1901.		1902.	
Source ...	Inspectors.	Private.								
Total Solids ...	11.08	10.63	11.41	11.46	10.28	11.29	11.28	10.91	10.91	10.44
Fat ...	2.79	2.73	3.06	3.66	2.85	3.25	2.96	2.70	2.90	2.26

The generally accepted average for milk is 12.5 per cent. of total solids, and four per cent. of fat.

The milk supply in the Borough as shown by Inspectors' samples is above the average in solids, but below the average in fat.

The remaining articles require no comment.

SECTION II.

GENERAL.

A.—*For Corporation.*B.—*Private Analyses.*

The various departments for which analyses, etc., have been made, and the number of samples are given below:—

BOROUGH ENGINEER'S DEPARTMENT—

Mortar, Water, and Sewage	87
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ELECTRIC LIGHT DEPARTMENT—

Pigments	2
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HEALTH DEPARTMENT—

Water and Mud	116
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POLICE—

OIL	1
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WATERWORKS DEPARTMENT—

Preparations...	+
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Water (hardness)	1004
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Total	1214
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This number, which is really for eleven months only, is eighteen less than in 1901.

BOROUGH ENGINEER'S DEPARTMENT.

The sample of Mortar submitted was of inferior quality, due to the quantity of lime being deficient and the sand dirty.

The samples of sewage, sewage effluent, and mud were in connection with the sewage disposal, and for the information and guidance of the Engineer, and he will no doubt deal with them in his report.

HEALTH DEPARTMENT.

The water analysed for this department is chiefly from the Borough supply and from wells of doubtful character supplying houses in the rural portions of the Borough. There are also samples from ships, and from streams on the common, the latter being contaminated with sewage from outside the Borough.

The purity of the supply, both from the Corporation Works at Otterbourne, and those of the South Hants Company at Twyford and Timsbury, has continued to be of the highest possible standard of organic purity during the year.

The softening at Otterbourne, except during the month of December, has been efficiently carried out, notwithstanding the extra work thrown upon the limited plant by the largely increased consumption. The South Hants supply is less efficiently softened, and it is frequently turbid.

The samples from wells are generally unfit for use, and steps are taken by the Medical Officer, the result of which steps will be dealt with by him in his report.

WATER WORKS DEPARTMENT.

These preparations were for use in cleaning meters and in connection with the softening process at Otterbourne.

The hardness of the supply for the year of the water from both sources is summarised below :—

SOURCE.	HARDNESS.		
	Highest.	Lowest.	Average.
Laboratory Tap & Shakespeare Avenne	15.94°	4.02°	6.98°
Tap at Bitterne	15.0°	5.72°	9.92°
Tap at Shirley	15.79°	4.4°	9.13°

The total samples, &c., dealt with during 1902 were:—

Food and drugs—

Corporation	...	...	...	172
Private	..	...	...	46
Newbury	...	...	...	23
General Analysis—	Corporation	...	1241	
	Private	...	...	69
				<hr/>
Total	...	...	...	1524
				<hr/>

The fees for private analyses for the year were ... £131 2s.
 Fees outstanding on December 31st, 1902 ... £5 15s.

I am, Gentlemen,

Your obedient servant,

J. BRIERLEY,
Public Analyst.



